SOME STUDIES RELATING TO THE VARIATION IN THE RATES OF CONSUMPTION AND PURCHASE FOR A FEW SELECTED FOOD ITEMS

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SUMMARY. The paper presents a study of the seasonal pattern of the incidence of day to day purchases and consumptions for a few selected food items. The reduction in variability with an increase in the size of ultimate accounting unit has been found to be considerable for some of the items. The relative merits of a two-stage sampling with households selected in the first stage and a specified time (accounting)-unit in the second or the other way round, has been discussed. The use of concommittant characters like 'salt' etc., and thus effectively reducing the size of sample needed for estimating the principal character, which is often difficult for enumeration, has been suggested.

1. INTRODUCTION

1.1. *Object and coverage.* An enquiry into the seasonal pattern of household consumption and purchases for certain items of food was undertaken by the Indian Statistical Institute at Giridih in June 1953. The main object of the enquiry was to study the nature of variations in these rates and to evolve suitable sampling schemes for an efficient estimation of annual averages. For this purpose a compact Block of ten villages, comprising an area of 5.5 sq. miles in the rural area near Giridih was chosen. The block contained 525 households in all with 2,708 heads, representing a predominantly non-agricultural population.

1.1.1. The items chosen for the present studies are somewhat trivial and most of them do not represent any character of likely national importance. It may also be noted that the seasonal pattern revealed in the tables refers to this particular locality and does not represent an all-India pattern. The scope of the enquiry was thus extremely limited, being essentially in the nature of a type study.

1.2. *Plan of the enquiry.* The entire block was subdivided into four zones, more or less equal in area, and from each a sample of 15 households were selected at random. One investigator was posted in each of the four zones, one inspector supervising the work of all the four investigators. The sixty sample households were enumerated on all the days of the year and to secure cooperation of the households in filling up of schedules, a small cash was paid to every household participating in the scheme. As a rule, the investigators were well received, even though a repeated call on every day of the year must have been quite irritating to all those households.

1.3. *Collection of the data.* Data on the consumption and purchases of the following fifteen food items were collected by a personal interview of the sample households and the quantities consumed and purchased on the previous day as reported by the household were recorded in *chhatacks**

* 1 chhatack = 5 tolas = 2 ounces approximately.

(1) cereals comprised mainly of wheat and rice, (2) dal (lentils), (3) meat, (4) edible oil, (5) milk, (6) potato, (7) kumra (sweet gourd), (8) kachu (arum), (9) brinjal, (10) vindi (ladies finger), (11) onion, (12) cabbage or cauliflower, (13) sugar, (14) gur (jaggery) and (15) salt.

It may be noted here that in addition to these day to day enquiries, with one day's period of reference, on the previous day's intake of the selected items of food in the sample household, some data with larger periods of reference were also collected from the same households. Besides, in 12 selected households, on specified days chosen at random, the investigators made direct weighings of the quantity intended for consumption on the day in respect of a few items. The relative merits of each approach so far as the reporting bias is concerned, have been reviewed in an earlier note.

1.3.1. A household was defined as the number of persons who took at least one principal meal on the day under reference. The size of household thus varied from day to day of the year.

2. SEASONAL PATTERN OF CONSUMPTION

2.0. *Rates of per capita per day consumption by months (4-week).* Table 1 gives the mean rates of consumption in chhatacks per day per capita as in the different months (4-week) of the year for each of the selected food items. All the vegetables have a marked seasonal pattern, highest consumption rates occurring usually towards the autumn and winter months. Cereals, pulses, salt and some others have, as expected, maintained a more or less steady level throughout the year. A frequency

TABLE 1. CONSUMPTION OF DIFFERENT FOOD ITEMS PER CAPITA PER DAY (IN CHATTACKS) IN THIRTEEN 4-WEEK MONTHS, GIRIDIH, JUNE 1953-MAY 1954

food items	4-week months													all month
	-28 June	-20 July	-23 Aug.	-20 Sept.	-18 Oct.	-15 Nov.	-13 Dec.	-10 Jan.	-7 Feb.	-7 Mar.	-4 April	-2 May	-30 May	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1. total cereals	9.69	9.75	9.87	10.15	9.83	10.20	10.28	10.18	10.10	10.12	10.00	9.93	9.83	10.00
2. dal	0.82	0.82	0.78	0.82	0.77	0.80	0.82	0.75	0.68	0.72	0.77	0.78	0.75	0.78
3. meat	0.12	0.14	0.10	0.09	0.30	0.06	0.07	0.06	0.12	0.07	0.10	0.11	0.10	0.11
4. edible oil	0.19	0.18	0.18	0.17	0.19	0.16	0.15	0.17	0.17	0.17	0.20	0.17	0.18	0.18
5. milk	0.50	0.47	0.74	0.98	0.85	0.72	0.60	0.48	0.36	0.31	0.35	0.27	0.31	0.53
6. potato	0.28	0.16	0.18	0.05	0.06	0.08	0.21	0.82	1.16	1.10	1.01	0.63	0.41	0.47
7. kumra	0.09	0.03	0.02	0.04	0.22	0.53	0.20	0.12	0.08	0.02	0.03	0.04	0.10	0.12
8. kachu	0.02	0.11	0.20	0.18	0.27	0.42	0.14	0.02	0.02	0.00	0.00	0.01	0.00	0.11
9. brinjal	0.01	0.00	0.00	0.00	0.00	0.02	0.22	0.75	0.93	0.72	0.34	0.10	0.06	0.11
10. vindi	0.04	0.03	0.02	0.32	0.38	0.10	0.00	—	—	—	0.00	0.00	0.04	0.07
11. onion	0.16	0.18	0.18	0.10	0.06	0.05	0.05	0.06	0.06	0.06	0.12	0.18	0.16	0.11
12. cauliflower	—	—	—	—	—	0.00	0.05	0.25	0.16	0.07	0.00	—	—	0.04
13. sugar	0.08	0.06	0.07	0.08	0.08	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.09	0.08
14. gur	0.30	0.19	0.18	0.15	0.12	0.09	0.07	0.08	0.13	0.09	0.12	0.08	0.06	0.13
15. salt	0.29	0.29	0.30	0.28	0.29	0.28	0.28	0.29	0.29	0.29	0.29	0.29	0.28	0.29

distribution of (as built up from the daily consumption data) the household weeks by different levels of weekly consumption per household in the thirteen 4-week months is given in Table A.1 in the Appendix.

In calcuating the mean consumption per capita per day, the number of total members actually taking meal in the household on the day was used as the divisor, and the same summed over a week or a month etc. has been used as the divisor for the calculating the per capita per day rates on a weekly or a monthly basis. Infants not yet fed on a cereal diet were however left out. Thus, for cereals and most of the items the size of household was quite appropriate representing the nett consuming size. The consumption rate of 'milk', has however been somewhat affected in as much as the infants living on milk alone were not taken into account, thus overestimating the per capita rates. The proportion of infants not partaking a usual diet was however very small, representing only 1.4 per cent.

2.1. *Distribution of households by number of weeks in which an item was consumed.* The pattern of consumption for these food items is also brought out by a frequency distribution of the sixty sampled households according to the total number of weeks in which a particular item was consumed in the year of 52 weeks.

TABLE 2. DISTRIBUTION OF HOUSEHOLDS BY NUMBER OF WEEKS IN WHICH
A PARTICULAR FOOD ITEM WAS CONSUMED, GIRIDIH
JUNE 1953–MAY 1954

food items	number of consuming weeks														
	nil	1–4	5–8	9–12	13–16	17–20	21–24	25–28	29–32	33–36	37–40	41–44	45–48	49–52	total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1. cereals	—	—	—	—	—	—	—	—	—	—	—	—	—	60	60
2. dal (pulses)	—	—	—	—	—	—	—	—	—	—	—	—	1	59	60
3. meat	2	6	15	13	10	4	2	4	2	1	—	—	1	—	60
4. edible oil	—	—	—	—	—	—	—	—	—	—	—	—	—	60	60
5. milk	2	11	4	6	3	4	4	3	4	—	2	2	4	11	60
6. potato	—	—	—	—	1	5	4	11	8	9	8	8	4	2	60
7. kumra	1	10	18	15	11	3	2	—	—	—	—	—	—	—	60
8. kachu	1	4	7	14	20	10	4	—	—	—	—	—	—	—	60
9. brinjal	—	1	3	7	15	16	13	2	3	—	—	—	—	—	60
10. vindi	1	13	12	20	10	2	2	—	—	—	—	—	—	—	60
11. onion	4	7	4	4	3	6	8	4	3	3	1	2	—	11	60
12. cauliflower	1	20	29	8	2	—	—	—	—	—	—	—	—	—	60
13. sugar	5	10	10	8	5	2	3	—	2	2	2	2	4	5	60
14. gur	1	2	4	6	10	7	8	8	3	4	3	2	1	1	60
15. salt	—	—	—	—	—	—	—	—	—	—	—	—	—	60	60

Columns (2)-(15) of Table 2 show that cereals, salt and oil are consumed as expected, in all the 52 weeks by all the households. *Dal* follows close to the cereals, only one household not consuming dal in all the 52 weeks. Distribution of households for milk, onion, sugar and gur is well scattered, consumption of these items ranging from only a few weeks to almost every week of the year. On the other hand, a large number of households are found to consume meat around 5-16 weeks in the year, while potato is consumed in at least 13 weeks in all the households. The rest, i.e., the seasonal vegetables are naturally consumed for a limited number of week in the year.

2.2. *Seasonal concentration of the consumption of specific items.* The seasonal pattern of consumption of food items is also revealed in Table 3 which gives the percentage of total household-days consuming a particular item in each month to the total of such household-days of the year.

TABLE 3. PERCENTAGE OF HOUSEHOLD CONSUMING DAYS IN THIRTEEN OF 4-WEEK MONTHS TO TOTAL HOUSEHOLD DAYS OF THE YEAR FOR DIFFERENT FOOD ITEMS, GIRIDIH, JUNE 1953-MAY 1954

food items	total number of consuming days of the year	4-week months												
		-28 June	-26 July	-23 Aug.	-20 Sept.	-18 Oct.	-15 Nov.	-13 Dec.	-10 Jan.	-7 Feb.	-7 Mar.	-4 April	-2 May	-30 May	all months
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1. total cereals	20803	7.8	7.7	7.6	7.6	7.3	7.8	7.8	7.8	7.9	7.7	7.7	7.7	7.6	100.0
2. dal	19507	7.9	8.0	7.9	8.0	7.5	7.7	7.9	7.4	6.9	7.5	7.7	7.8	7.8	100.0
3. meat	930	10.2	10.3	7.3	7.2	13.5	3.6	6.1	5.1	8.5	4.8	8.1	7.6	7.7	100.0
4. edible oil	21518	7.6	7.6	7.7	7.8	7.7	7.7	7.7	7.7	7.7	7.8	7.7	7.7	7.6	100.0
5. milk	8537	7.2	6.6	9.2	10.0	9.6	9.2	8.7	7.8	6.2	6.0	6.9	6.2	6.4	100.0
6. potato	9052	5.4	3.4	3.5	1.3	1.6	1.9	4.4	13.3	15.7	16.0	14.9	11.0	7.6	100.0
7. kumra	996	6.9	2.3	2.0	2.6	13.2	33.2	14.6	7.2	4.0	1.0	2.0	3.2	7.8	100.0
8. kachu	1801	1.7	12.3	17.4	12.9	17.3	26.0	8.6	1.6	1.1	0.2	0.2	0.5	0.2	100.0
9. brinjal	4066	0.3	0.1	0.0	0.0	0.3	1.3	8.5	22.7	25.0	22.7	12.5	4.3	2.3	100.0
10. vindi	1514	2.9	3.2	3.1	32.7	40.2	12.5	0.7	—	—	—	0.1	0.4	6.9	100.0
11. onion	5952	11.0	10.9	11.2	7.8	6.4	5.0	4.6	4.9	5.3	5.2	8.0	9.8	9.9	100.0
12. cauliflower	933	—	—	—	—	—	0.1	11.6	49.8	28.8	9.6	0.1	—	—	100.0
13. sugar	4443	7.3	6.2	6.5	8.5	9.2	8.2	8.3	7.0	6.4	7.1	7.6	8.5	9.2	100.0
14. gur	3516	10.8	11.6	10.8	7.6	5.7	5.0	4.2	6.2	8.3	6.9	7.4	5.5	4.0	100.0
15. salt	21709	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.6	100.0

2.2.1. Table 4 gives the average number of consuming days per household for each of the thirteen months (4-weeks) of the year, item by item. The seasonal pattern of the vegetables is brought out quite clearly in Tables 3 and 4, while number of consuming days for cereal, dal, oil, sugar and salt exhibit no special trend. It will appear, that the incidence of potato consumption is higher in the months of November to April or May.

TABLE 4. AVERAGE NUMBER OF CONSUMING DAYS PER HOUSEHOLD IN THIRTEENTH 4-WEEK MONTHS FOR DIFFERENT FOOD ITEMS, GIRIDIH, JUNE 1953–MAY 1954

food items	4-week months													all month
	-28 June	-26 July	-23 Aug.	-20 Sept.	-18 Oct.	-15 Nov.	-13 Dec.	-10 Jan.	-7 Feb.	-7 Mar.	-4 April	-2 May	-30 May	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1. total cereals	27.0	26.8	26.4	26.2	25.2	26.9	27.2	26.9	27.4	26.8	26.7	26.8	26.5	26.7
2. dal	25.6	26.1	25.6	26.0	24.4	25.0	25.8	24.1	22.4	24.3	25.1	25.4	25.2	25.0
3. meat	1.6	1.6	1.1	1.1	2.1	0.6	1.0	0.8	1.3	0.8	1.2	1.2	1.2	1.2
4. edible oil	27.2	27.8	27.6	27.8	27.8	27.6	27.6	27.7	27.7	27.9	27.6	27.7	27.2	27.6
5. milk	10.2	9.4	13.0	14.2	13.8	13.2	12.3	11.1	8.8	8.5	9.8	8.8	9.1	10.9
6. potato	8.2	5.2	5.4	2.0	2.4	2.8	6.7	20.1	23.6	24.1	22.5	16.6	11.4	11.6
7. kumra	1.1	0.4	0.3	0.4	2.2	5.5	2.4	1.2	0.7	0.2	0.3	0.5	1.3	1.3
8. kachu	0.5	3.7	5.2	3.9	5.2	7.8	2.6	0.5	0.3	0.0	0.1	0.2	0.1	2.3
9. brinjal	0.2	0.1	0.0	0.0	0.2	0.9	5.8	15.4	17.0	15.4	8.5	2.9	1.6	5.2
10. vindi	0.8	0.8	0.8	8.3	10.1	3.2	0.2	—	—	—	0.0	0.1	1.0	1.9
11. onion	10.9	10.8	11.2	7.7	6.3	4.9	4.5	4.9	5.8	5.2	8.0	9.7	9.8	7.6
12 cauliflower	—	—	. —	—	—	0.0	1.8	7.7	4.4	1.5	0.0	—	—	1.2
13. sugar	5.4	4.6	4.8	6.2	6.8	6.1	6.2	5.2	4.8	5.3	5.6	6.3	6.8	5.7
14. gur	9.8	6.8	6.3	4.5	3.3	3.0	2.5	3.6	4.8	4.1	4.3	3.2	2.3	4.5
15. salt	27.8	27.9	27.9	27.9	28.0	28.0	27.8	27.8	27.9	28.0	27.8	27.8	27.4	27.8

2.2.2. Consumption of kumra is more frequent during the months of September to December and that of kachu in the months of July to November. For brinjal, the highest is between the months of November and March, while the maximum for vindi is between September and October.

71

3. SEASONAL PATTERN OF RETAIL PURCHASES

3.0. *Per capita quantities purchased in different months (4-week).* This section deals with the distribution of retail purchases over the year, each day in which a particular item was purchased by an individual household being defined as a household purchasing day. Separate purchases of the same item at different hours of the day were pooled up and treated as a single act of purchase. Table 5 gives the quantities in chhatacks purchased per capita per day as in the different months (4-week) of the year, for each of the selected food items. The seasonal pattern is almost parallel to the consumption rates shown in Table 1. It will be noted that the quantities purchased for some of the items fall substantially short of the quantities consumed. The balance obviously is met out of home grown produce and other receipts.

TABLE 5. MEAN QUANTITIES PURCHASED (IN CHHATACK PER CAPITA PER DAY) IN THIRTEEN 4-WEEK MONTHS FOR DIFFERENT FOOD ITEMS, GIRIDIH

JUNE 1953-MAY 1954

food items	4-week months													
	-28 June	-26 July	-23 Aug.	-20 Sept.	-18 Oct.	-15 Nov.	-13 Dec.	-10 Jan.	-7 Feb.	-7 Mar.	-4 April	-2 May	-30 May	all month
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1. total cereals	5.44	4.23	3.50	4.21	5.11	3.00	1.48	3.04	3.52	3.67	4.18	4.85	5.25	3.95
2. dal	0.83	0.70	0.63	0.54	0.56	0.64	0.55	0.60	0.57	0.68	0.75	0.60	0.72	0.65
3. meat	0.09	0.06	0.06	0.07	0.10	0.03	0.07	0.04	0.10	0.06	0.10	0.09	0.06	0.07
4. edible oil	0.18	0.16	0.15	0.17	0.18	0.15	0.17	0.17	0.17	0.17	0.20	0.17	0.17	0.17
5. milk	0.06	0.06	0.06	0.07	0.08	0.10	0.07	0.06	0.05	0.06	0.09	0.07	0.12	0.07
6. potato	0.28	0.15	0.14	0.05	0.07	0.09	0.25	0.79	0.94	0.91	0.88	0.70	0.36	0.42
7. kumra	0.04	0.01	0.01	0.01	0.04	0.15	0.10	0.03	0.01	0.01	0.01	0.01	0.03	0.04
8. kachu	0.02	0.10	0.22	0.14	0.20	0.18	0.06	0.00	0.00	—	—	—	—	0.07
9. brinjal	0.02	0.00	0.00	0.00	0.01	0.02	0.01	0.44	0.47	0.34	0.15	0.06	0.03	0.11
10. vindi	0.02	0.01	0.01	0.07	0.10	0.03	—	—	—	—	—	0.00	0.02	0.02
11. onion	0.11	0.16	0.15	0.10	0.07	0.04	0.03	0.04	0.04	0.05	0.06	0.11	0.11	0.09
12. cauliflower	—	—	—	—	—	0.00	0.06	0.18	0.11	0.05	—	—	—	0.02
13. sugar	0.06	0.06	0.06	0.08	0.08	0.07	0.08	0.08	0.08	0.7	0.12	0.11	0.08	0.08
14. gur	0.71	0.27	0.13	0.14	0.11	0.31	0.12	0.11	0.13	0.10	0.14	0.12	0.06	0.19
15. salt	0.22	0.27	0.26	0.24	0.26	0.29	0.29	0.27	0.33	0.35	0.28	0.41	0.36	0.30

3.0.1. Table A.2 in the Appendix, gives the frequency distribution of household weeks by levels of weekly purchases (in chhatack) per household.

3.1. *Distribution of the purchasing household for different items over the year.* Apart from the frequency distribution of the household weeks by levels of the quantities purchased, it will be interesting to see how the households are distributed according to the number of weeks in which some purchases, irrespective of the quantity, have been made by individual household. Columns (2)-(15) of Table 6 similar to Table 2 give the frequency of households according to the total number of weeks in which purchases of the different items of food were made. The seasonal vegetables and some of the other items also show a pattern identical with consumption, because these perishable items are consumed as soon as purchased. Purchases of cereals and *dal* have somewhat greater dispersion, while, onions, potato, sugar, gur and salt are purchased in bits throughout the year.

TABLE 6. DISTRIBUTION OF HOUSEHOLDS BY NUMBER OF WEEKS IN WHICH A PARTICULAR FOOD ITEM WAS PURCHASED, GIRIDIH, JUNE 1953-MAY 1954

food items	number of purchasing weeks														
	nil	1–4	5–8	9–12	13–16	17–20	21–24	25–28	29–32	33–36	37–40	41–44	45–48	49–52	total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1. total cereal	—	—	—	—	1	2	—	3	8	5	8	7	4	22	60
2. dal	—	—	—	—	—	1	—	3	2	4	5	12	9	24	60
3. meat	4	8	20	13	6	4	—	2	2	—	—	1	—	—	60
4. edible oil	—	—	—	—	—	1	1	1	1	—	2	10	15	29	60
5. milk	8	23	11	5	1	4	2	—	3	—	1	—	—	2	60
6. potato	—	—	—	2	3	5	8	14	7	12	3	3	3	—	60
7. kumra	4	35	15	6	—	—	—	—	—	—	—	—	—	—	60
8. kachu	4	9	12	13	21	1	—	—	—	—	—	—	—	—	60
9. brinjal	1	13	7	18	12	6	3	—	—	—	—	—	—	—	60
10. vindi	13	29	10	6	2	—	—	—	—	—	—	—	—	—	60
11. onion	4	10	7	6	10	3	3	5	1	—	2	2	3	4	60
12. cauliflower	4	34	16	6	—	—	—	—	—	—	—	—	—	—	60
13. sugar	5	12	11	4	6	4	2	1	3	3	3	1	3	3	60
14. gur	1	3	8	6	9	8	13	4	5	2	—	1	—	—	60
15. salt	—	—	—	1	2	2	4	4	11	7	9	11	8	1	60

3.2 *Seasonal concentration in the retail purchasing of specific items.* The relative concentrations of purcashing days in different parts of the year may be brought out either by the percentage distribution of households purchasing days in the year or by the intensity, i.e., the number of purchases per household. Tables 7 and 8 parallel to consumption Tables 3 and 4 give the seasonal concentration of purchases in the different months of the year. The percentage of total purchasing days in a month to total purchasing days in the year is given in Table 7 while Table 8 gives the average number of purchasing days per household in each month of 4-weeks.

TABLE 7. PERCENTAGE OF HOUSEHOLD PURCHASING DAYS IN THIRTEEN 4-WEEK
MONTHS TO TOTAL HOUSEHOLD PURCHASING DAYS OF THE YEAR FOR
FOOD ITEMS, GIRIDIH, JUNE 1953–MAY 1954

food items	total number of purchasing days of the year	4-week months													all month
		−28 June	−26 July	−23 Aug.	−20 Sept.	−18 Oct.	−15 Nov.	−13 Dec.	−10 Jan.	−7 Feb.	−7 Mar.	−4 April	−2 May	−30 May	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1. total cereals	8275	11.8	9.3	8.8	9.3	9.9	7.1	4.5	4.5	5.8	5.6	7.3	8.2	7.9	100.0
2. dal	7422	10.0	8.3	8.0	6.2	7.4	8.1	6.4	6.2	6.3	7.1	8.2	8.9	8.9	100.0
3. meat	670	11.1	7.9	7.5	7.9	9.1	3.3	7.3	5.4	10.3	5.4	9.7	7.2	7.9	100.0
4. edible oil	5580	7.8	7.3	7.2	7.6	7.4	7.3	8.3	8.3	7.7	7.5	7.8	8.0	100.0
5. milk	2248	5.7	7.2	7.6	7.6	8.2	7.1	6.1	5.6	5.3	7.2	10.3	9.9	12.2	100.0
6. potato	4008	7.3	4.3	5.1	1.4	2.2	2.8	6.6	14.7	13.5	12.2	12.6	10.4	6.9	100.0
7. kumra	320	11.3	3.4	2.2	1.6	9.4	35.5	17.8	6.3	1.9	0.9	2.2	1.9	5.6	100.0
8. kachu	909	1.7	15.5	21.6	15.4	21.4	18.6	5.4	0.3	0.1	—	—	—	100.0
9. brinjal	1086	1.1	0.4	0.1	0.1	1.0	2.5	12.6	27.5	24.2	16.1	9.1	2.8	2.5	100.0
10. vindi	366	7.9	5.7	5.2	22.4	35.0	11.8	—	—	—	—		1.1	10.9	100.0
11. onion	1762	11.9	11.8	12.6	7.9	6.8	4.9	4.5	5.1	5.1	4.4	7.3	8.6	9.1	100.0
12. cauliflower	371	—	—	—	—	—	0.3	16.7	46.6	26.4	10.0	—	—		100.0
13. sugar	2455	7.8	6.2	6.5	9.0	10.0	9.2	8.8	7.5	6.7	6.4	7.1	7.2	7.6	100.0
14. gur	1858	12.0	6.2	6.2	6.5	8.4	7.5	5.6	9.4	10.7	9.0	8.0	6.4	5.1	100.0
15. salt	2980	7.2	7.3	7.5	7.1	7.6	8.3	8.3	7.9	7.8	8.1	7.9	8.0	7.0	100.0

TABLE 8. AVERAGE NUMBER OF PURCHASING DAYS PER HOUSEHOLD IN THIRTEEN
4-WEEK MONTHS FOR DIFFERENT FOOD ITEMS, GIRIDIH, JUNE 1953–MAY 1954

food items	4-week months													all month
	−28 June	−26 July	−23 Aug.	−20 Sept.	−18 Oct.	−15 Nov.	−13 Dec.	−10 Jan.	−7 Feb.	−7 Mar.	−4 April	−2 May	−30 May	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1. total cereals	16.3	12.9	12.1	12.8	13.6	9.9	6.2	6.2	8.0	7.8	10.1	11.3	11.0	10.6
2. dal	12.5	10.2	9.9	7.7	9.1	10.0	7.9	7.7	7.8	8.8	10.2	11.0	11.0	9.5
3. meat	1.2	0.9	0.8	0.9	1.0	0.4	0.8	0.6	1.2	0.6	1.1	0.8	0.9	0.9
4. edible oil	7.3	6.7	6.6	7.1	6.9	6.8	7.8	7.7	7.1	6.9	7.2	7.2	7.4	7.1
5. milk	2.1	2.7	2.8	2.8	3.1	2.7	2.3	2.1	2.0	2.7	3.8	3.7	4.6	2.9
6. potato	4.9	2.8	3.4	0.9	1.5	1.8	4.4	10.0	9.0	8.2	8.4	6.9	4.6	5.1
7. kumra	0.6	0.2	0.1	0.1	0.5	1.9	1.0	0.3	0.1	0.0	0.1	0.1	0.3	0.4
8. kachu	0.2	2.4	3.3	2.3	3.2	2.8	0.8	0.0	0.0	—	—	—	—	1.0
9. brinjal	0.2	0.1	0.0	0.0	0.2	0.4	2.3	5.0	4.4	2.9	1.6	0.5	0.4	1.4
10. vindi	0.5	0.4	0.3	1.4	2.1	0.7	—	—	—	—		0.1	0.7	0.5
11. onion	3.5	3.5	3.7	2.3	2.0	1.4	1.3	1.5	1.5	1.3	2.2	2.5	2.7	2.3
12. cauliflower	—	—	—	—	—	0.0	1.0	2.9	1.6	0.6	—	—		0.5
13. sugar	3.2	2.6	2.6	3.7	4.1	3.8	3.6	3.0	2.8	2.6	2.9	2.9	3.1	3.1
14. gur	3.6	1.9	1.9	2.0	2.0	2.4	1.7	2.9	3.3	3.1	2.5	2.0	1.6	2.4
15. salt	3.6	3.6	3.7	3.5	3.8	4.2	4.1	3.9	3.9	4.0	3.9	4.0	3.5	3.8

3.2.1. The trends are more or less parallel to that in consumption specially for the perishable seasonal vegetables and the tables are self-explanatory.

3.3. *Time interval between purchases of specified items.* The interval or gap between one purchase and the next varies from item to item and from household to household. In some households, particular items, rice for instance, is often stocked in bulk and less frequently purchased. Wage earners on the otherhand are compelled to make intermittent purchases synchronized with the periodicity of wage-payments, daily, weekly or monthly. A percentage distribution of 'household-purchasing-days', or in other words distribution of the gaps between successive purchases (by the same household) according to the gap-lengths, counted over all the sixty households by such gaps has been given in Table 9. Frequent short-interval purchases are quite marked in case of dal, edible oil, milk, potato and sugar, the number of cases falling rapidly as the interval increases in length.

TABLE 9. PERCENTAGE FREQUENCY OF HOUSEHOLD PURCHASING DAYS BY THE LENGTH OF GAPS (IN DAYS) BETWEEN TWO SUCCESSIVE PURCHASES FOR DIFFERENT FOOD ITEMS, GIRIDIH, JUNE 1953–MAY 1954

food items	lengths of gap in days between successive purchases												total number of purchasing days =100
	1	2	3	4	5	6	7	8–14	15–21	22–28	above 28	total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1. total cereals	61.3	14.8	7.0	4.1	2.9	2.4	2.8	2.9	0.8	0.4	0.6	100.0	8275
2. dal	52.1	14.7	8.2	6.1	4.9	3.6	5.6	3.2	0.8	0.3	0.5	100.0	7422
3. meat	7.7	3.1	3.7	2.9	4.4	3.1	9.2	18.6	10.6	6.9	29.8	100.0	670
4. edible oil	31.4	15.0	11.0	8.5	5.1	5.4	17.6	5.1	0.5	0.1	0.3	100.0	5560
5. milk	84.9	3.6	1.4	1.2	0.4	0.4	0.5	1.7	1.1	1.0	3.7	100.0	2248
6. potato	41.8	16.0	9.0	5.6	4.3	3.7	7.9	6.0	1.6	1.0	2.1	100.0	4008
7. kumra	18.6	7.7	6.4	5.7	4.0	4.0	4.0	12.8	6.7	5.7	24.2	100.0	320
8. kachu	22.6	15.3	11.5	8.1	4.9	4.0	7.9	12.9	4.9	3.7	4.2	100.0	909
9. brinjal	25.7	13.4	10.6	7.2	6.2	5.6	11.9	10.0	3.8	1.2	4.4	100.0	1086
10. vindi	32.4	14.1	7.5	4.7	4.4	3.8	5.3	10.6	5.0	0.6	11.6	100.0	366
11. onion	30.6	8.0	4.8	5.6	4.9	5.4	20.8	10.6	3.1	1.4	4.8	100.0	1762
12. cauliflower	23.6	15.5	8.5	8.2	6.7	5.2	7.6	12.8	4.6	1.8	5.5	100.0	371
13. sugar	49.5	14.2	7.3	5.3	4.1	2.4	3.4	6.2	2.3	1.1	4.2	100.0	2455
14. gur	31.4	12.2	7.0	5.4	5.2	3.4	3.4	11.9	7.4	4.2	8.5	100.0	1858
15. salt	24.2	4.4	2.8	3.1	3.0	0.0	27.0	19.9	5.4	1.2	1.5	100.0	2980

3.4. *Average number of consuming days per day of purchase by items.* Table 10 gives the number of consuming household days per household-day of purchase, as in each month (4-week), by individual items, derived by calculating the ratios of the

corresponding figures in Tables 4 and 8. These ratios, as will be seen, are always greater than one. Obviously, total consumption is not decided by purchases alone, as has already been explained in para 3.0 above.

TABLE 10. AVERAGE NUMBER OF CONSUMING DAYS PER PURCHASE IN THIRTEEN 4-WEEK MONTHS FOR DIFFERENT FOOD ITEMS, GIRIDIH, JUNE 1953-MAY 1954

food items	4-week months													all month
	−28 June	−26 July	−23 Aug.	−20 Sept.	−18 Oct.	−15 Nov.	−13 Dec.	−10 Jan.	−7 Feb.	−7 Mar.	−4 April	−2 May	−30 May	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1. total cereals	1.6	2.0	2.2	2.1	1.8	2.7	4.4	4.3	3.4	3.4	2.8	2.4	2.4	2.5
2. dal	2.0	2.6	2.6	3.4	2.7	2.5	3.3	3.1	2.9	2.8	2.5	2.3	2.3	2.6
3. meat	1.3	1.8	1.3	1.3	2.1	1.6	1.2	1.3	1.1	1.3	1.2	1.5	1.4	1.4
4. edible oil	3.7	4.1	4.2	3.9	4.0	4.1	3.6	3.6	3.9	4.0	3.8	3.8	3.7	3.9
5. milk	4.8	3.4	4.6	5.0	4.5	4.0	5.4	5.2	4.4	3.2	2.6	2.4	2.0	3.8
6. potato	1.7	1.8	1.6	2.1	1.6	1.5	1.5	2.0	2.6	3.0	2.7	2.4	2.5	2.3
7. kumra	1.9	2.0	2.7	5.5	4.2	2.9	2.5	3.8	5.7	4.0	2.7	6.5	4.1	3.1
8. kachu	2.1	1.6	1.6	1.7	1.6	2.8	3.2	12.0	—	—	—	—	—	2.0
9. brinjal	1.0	1.0	0.0	0.0	1.0	2.0	2.5	3.1	3.9	5.3	5.2	5.5	3.6	3.7
10. vindi	1.6	2.2	2.5	6.1	4.8	4.4	—	—	—	—	—	1.5	1.5	4.1
11. onion	3.1	3.1	3.0	3.3	3.2	3.4	3.4	3.3	3.5	4.1	3.7	3.9	3.7	3.4
12. cauliflower	—	—	—	—	—	—	1.7	2.7	2.7	2.5	—	—	—	2.5
13. sugar	1.7	1.8	1.8	1.7	1.7	1.6	1.7	1.7	1.7	2.0	1.9	2.2	2.2	1.8
14. gur	2.6	3.5	3.3	2.2	1.7	1.2	1.4	1.2	1.5	1.3	1.7	1.6	1.4	1.9
15. salt	7.8	7.7	7.5	7.9	7.4	6.7	6.8	7.1	7.2	6.9	7.1	7.0	7.9	7.3

4 VARIABILITY IN THE CONSUMPTION RATES

4.0. In this section, the variability in household consumption has been studied. Also, the data has been used for model sampling experiments on variance functions corresponding to different sampling schemes.

4.1. 'Gross' variability. In assessing the variability in the consumption rates, non-availability of these items for consumption in particular quarters of the year, was not taken into account. The "gross" variabilities have thus been worked out for the year as a whole without attempting any item-specific stratification over time. It is evident that a household is likely to consume and purchase each of these items on one day or the other, if not on each day. From the point of view of data collection, it is therefore cheaper and convenient to include all of them in each of the 365 days of investigation, ignoring the seasonal patterns. In any case it does not seem to be worthwhile to conduct an item-specific enquiry or enquiry

confined to a selected group of item, when at a very small marginal cost, data relating to all the rest can be collected at the same time. We shall therefore discuss the gross variabilities of the rates of consumption or of purchase for each individual food-items and *not* the relatively lower variabilities within the respective seasonal strata, i.e., the effective periods of respective consumptions.

4.2. *Model sampling studies.* The data in hand is already stated, comprised of the day to day consumption on all the days of the year for each of the sixty households selected at random from a population of 525 households. Although the data relates to one particular year, it has been assumed that the year under review was a typical one and so the sample may be considered to have represented over years as well. The ultimate units, namely the "household-days" were regrouped into new clusters comprising household-weeks, household-2 weeks, household-4 weeks, etc. representing the ultimate units of re-constituted samples. The rates of consumption were then computed for each cluster-unit in two different scales (a) chhatack per capita per day and (b) chhattack per household per day. These 'rates' or ratios were calculated for each individual cluster unit of r days, as :

$$\text{(a)} \quad \frac{\sum_{j=1}^{j=r} q_{ij}}{\sum_{j=1}^{j=r} x_{ij}}$$

and

$$\text{(b)} \quad \frac{\sum_{j=1}^{j=r} q_{ij}}{r}$$

where q_{ij} is the quantity for the particular item consumed by the i-th household on the j-th day and x_{ij} is the number of members partaking meal on the j-th day in the i-th household. Since the ratios were each time recalculated on fresh sizes of clusters, their averages, were not expected to be arithmetically identical. This can be seen from columns (2) and (5) of Table 11 given hereafter. The ratio estimates as expected exhibit considerable bias, specially when the sampling units are small; it has been assumed, however, that the coefficients of variation may not be so seriously affected.

4.2.1. The reference population here consists of the daily consumption of an item for all the days in the year (p), in respect of every household (N) in the locality. A sample of n household (here, 60) was selected at random and for each household thus selected, daily consumption of an item was recorded for all the days (p) in the year. The appropriate scheme for estimating the components of population variance is being given below.

SCHEME FOR AN ANALYSIS OF VARIANCE FOR A SAMPLE OF HOUSEHOLD (n)
OBSERVED ON ALL DAYS (p) OF THE YEAR

source	d.f.	m.s.	e(m.s.)	estimate of the population components of variance
	(1)	(2)	(3)	(4)
between days	$p-1$	sd^2	$nG_2^2 + G_1^2$	$\frac{1}{n}\left(s_2^2 - s_1^2\right)$
between households	$n-1$	Sh^2	$p.\, \sigma_n^2$	$\frac{1}{p}\left(\sigma_n^2 - s_n\right)$
household x day	$(n-1)(p-1)$	S_1	σ^2	S_1^2

Such a scheme of analysis would apply for all the samples, reconstituted on different
sizes of sampling units (1-day, 1-week, 2-week etc.). One of our major interests is
in finding the suitable unit which would give a low variability commensurate with
cost. Obviously the larger the sampling unit, i.e., the larger the accounting period,
the lower should be the coefficient of variation. We have to assume however that

(i) consumption can be recalled even if the re-call period is large i.e., the
question of bias or memory lapses being ignored,

(ii) one-week units, two-week units etc. artificially built up by adding over
the daily figures which were originally collected, are not substantially different from
what would have been obtained if the total consumption for one week, two weeks,
etc., were collected as a whole during the interviews, and also that,

(iii) the cost of enumeration is practically independent of the length of
"accounting period."

4.2.2. Subject to the above assumptions, as regards the basic data, estimates
of the population variabilities in each stage of sampling were worked out on the basis
of (1) unistage sampling structure and (2) two-stage sampling structure of the popula-
tion to be sampled. The stage components of variance would determine as to how
many households and how many time-units per household, must be sampled in a
year, using sampling units of a specified accounting period so as to achieve a given
degree of precision, as discussed below :

(1) *Uni-stage structure.* This scheme conforms to a selection of the ultimate
sampling units (household day, household week etc.) directly from a two-dimensional
field constituted of all households over all such units in the year. The coefficients
of total variation which applies to a scheme of unistage sampling, has been given in
column (4) of Table 11.

(2) *Two-stage structure.* (a) *Households in the first stage and time units in
the second stage.* Table 11 in column (3) gives the estimates of 'true' (i.e., popula-
tion) coefficients of variation of the *per capita* per day rates of consumption in the

second stage, namely "within households between time-units," for each of the food items chosen, corresponding to different lengths of time-units used as sampling units. The true coefficients of variation in the first stage, namely, "between households" which are independent of the size of sampling units (apart from changes in household size which was negligible) are given at the top for each item. The coefficients of "within variability" as expected, fall with an increasing size of unit. Items like cereals, *dal*, salt, sugar, *gur* etc., which have a steady rate of consumption throughout the year, do not show any pronounced decrease in variability with increased size of unit, while the items with definite seasonal fluctuations registered a marked fall. Columns (6)-(7) similar to columns (3)-(4) give the true coefficients of variation but on a 'per family' scale instead of the 'per capita' scale. The behaviour is more or less same as in the case of 'per capita' variations.

(b) *"Calendar time-units" in the first stage and "household-time units" in the second stge.* Total variability has also been analysed into their stage components, where calendar 'time periods' represented the first-stage, within which individual households selected at random were treated as the second stage. For items with large seasonal fluctuations, "between time" components of raw variances were found to be relatively large. The estimates of "true" coefficients of variation are given in Table 12 where calendar-days and calendar weeks were treated as the first stage-units and 'household-day' or one 'household-week' was taken respectively as the ultimate sampling unit, i.e., accounting unit.

4.2.3. Appendix Table A.3 gives the analysis of the 'raw' sample variances into their stage components for scheme (a) and to be A.4 for scheme (b). Although the sampling scheme does not permit of an appropiate testing of the stage variances, the relative magnitudes of the stage mean squares (raw), suggest the existence of effective stages in almost all cases.

4.2.4. The first stage time-units should however be distinguished from the accounting-time units. After selecting a few calendar dates out of total of 364 in the first stage, and then selecting a number of households to be surveyed within each, we are free to choose a day or even a week, month, etc. (if overlapping is allowed) as the ultimate sampling or accounting unit.

4.3. *Variance functions.* Cofficient of variation C as a function of the size of unit, in the form $C = a(x)^{-g}$, where x indicates the size of the sampling unit while a and g are constants, were fitted by the method of least squares against the observed coefficients of variation (i) within household and (ii) total between households as given in columns (3) and (4) of Table 11 for each food item. The graduated values for the 'within' and 'total' coefficients of "true" variation have been shown in Table 11 where households represented the first stage units corresponding to a two-stage structure of the type 2(a). The values of g indicate the slope, i.e.,

rate of fall in the coefficients of variation with an increase in unit-size. The constants a and g have been given in columns (3) and (4). For items with large seasonal fluctuations, the gains achieved by increasing the accounting period is considerable as is indicated by the high values of g.

TABLE 11. COEFFICIENTS OF VARIATION (TRUE) AT DIFFERENT STAGES IN SAMPLING WITH HOUSEHOLDS SELECTED IN THE FIRST STAGE WITH VARYING SIZE OF TIME UNITS (ACCOUNTING) IN THE SECOND STAGE

time-units (accounting period) in the stage within household	per capita per day			per household per day		
	mean in chhatacks	coefficient of variation		mean in chhatacks	coefficient of variation	
		within household	total		within household	total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. *total cereals*	(c.v. between household = 21.3%)			(c.v. between household = 61.3%)		
day	10.03	16.3	26.6	69.70	24.4	65.5
week	10.00	11.3	23.7	69.70	18.0	63.3
2 week	9.99	10.3	23.2	69.70	16.1	62.8
4 week	9.99	7.8	22.2	69.70	14.5	62.4
13 week	9.97	6.4	21.6	69.70	11.7	61.7
26 week	9.97	6.1	21.4	69.70	10.8	61.5
2. *dal*	(c.v. between household = 33.9%)			(c.v. between household = 69.5%)		
day	0.78	46.6	58.3	5.41	54.3	87.8
week	0.78	28.1	43.7	5.41	31.6	75.7
2 week	0.77	26.1	42.2	5.41	27.9	74.2
4 week	0.79	21.9	39.5	5.41	24.2	72.8
13 week	0.77	17.1	36.7	5.41	20.1	17.3
26 week	0.77	13.1	35.0	5.41	19.2	70.6
3. *meat*	(c.v. between household = 76.9%)			(c.v. between household = 105.1%)		
day	0.11	549.5	531.1	0.78	632.0	639.7
week	0.11	227.6	239.3	0.78	257.7	276.0
2 week	0.11	161.6	177.2	0.78	189.2	213.0
4 week	0.11	112.1	134.0	0.78	125.6	159.8
13 week	0.11	48.1	86.4	0.78	61.5	117.7
26 week	0.11	28.6	82.1	0.78	46.6	110.2

TABLE 11 (contd.). COEFFICIENTS OF VARIATION (TRUE) AT DIFFERENT STAGES IN
SAMPLING WITH HOUSEHOLDS SELECTED IN THE FIRST STAGE WITH VARYING
SIZE OF TIME UNITS (ACCOUNTING) IN THE SECOND STAGE

time-units (accounting period) in the second stage within household	per capita per day			per household per day		
	mean in chhataks	coefficient of variation		mean in chhataks	coefficient of variation	
		within household	total		within household	total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
4. edible oil	(c.v. between household = 39.4%)			(c.v. between household = 79.8%)		
day	0.18	67.9	78.4	1.24	79.0	112.1
week	0.18	35.9	53.1	1.24	36.4	87.1
2 week	0.17	28.8	47.2	1.24	29.6	84.5
4 week	0.17	23.7	44.3	1.24	24.8	82.8
13 week	0.17	18.1	41.2	1.24	19.1	81.2
26 week	0.17	8.2	40.2	1.24	15.6	80.4
5. milk	(c.v. between household = 130.8%)			(c.v. between household = 165.3%)		
day	0.54	203.4	261.0	4.44	160.0	221.8
week	0.54	118.2	176.0	4.44	125.9	205.8
2 week	0.53	115.2	171.6	4.44	120.7	202.1
4 week	0.53	111.2	167.0	4.44	116.4	198.4
13 week	0.53	103.3	155.6	4.44	118.0	193.5
26 week	0.53	88.9	144.9	4.44	110.0	182.1
6. potato	(c.v. between household = 356.1%)			(c.v. between household = 84.7%)		
day	0.47	140.2	151.2	3.20	163.4	183.8
week	0.47	113.8	123.7	3.20	133.8	157.0
2 week	0.47	110.5	120.1	3.20	131.2	153.7
4 week	0.47	107.7	115.4	3.20	130.0	150.6
13 week	0.47	100.7	101.5	3.20	122.2	135.7
26 week	0.47	—	99.1	3.20	—	132.3
7. kumra	(c.v. between household = 83.4%)			(c.v. between household = 96.5%)		
day	0.12	631.4	527.4	0.85	532.9	541.2
week	0.12	272.8	290.1	0.85	297.6	310.6
2 week	0.12	235.6	252.2	0.85	260.6	273.3
4 week	0.12	208.2	222.6	0.85	235.9	246.5
13 week	0.12	163.9	161.0	0.85	176.1	180.7
26 week	0.12	—	111.8	0.85	111.4	124.7

11

TABLE 11 (contd.). COEFFICIENTS OF VARIATION (TRUE) AT DIFFERENT STAGES IN
SAMPLING WITH HOUSEHOLDS SELECTED IN THE FIRST STAGE WITH VARYING
SIZE OF TIME UNITS (ACCOUNTING) IN THE SECOND STAGE

time-units (accounting period) in the second stage within household	per capita per day			per household per day		
	mean in chhataoks	coefficient of variation		mean in chhataoks	coefficient of variation	
		within household	total		within household	total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
8. *kachu*	(c.v. between household = 65.4%)			(c.v. between household = 101.2%)		
day	0.11	386.6	392.8	0.80	432.5	443.8
week	0.11	231.8	246.6	0.80	282.0	297.8
2 week	0.11	205.7	219.0	0.80	256.5	271.8
4 week	0.11	186.7	197.3	0.80	240.5	253.0
13 week	0.11	—	153.9	0.80	194.0	196.8
26 week	0.11	—	121.8	0.80	—	159.8
9. *brinjal*	(c.v. between household = 55.2%)			(c.v. between household = 94.3%)		
day	0.24	246.8	254.0	1.74	270.1	285.1
week	0.24	188.7	191.8	1.75	205.9	225.1
2 week	0.24	180.2	182.4	1.75	198.9	216.0
4 week	0.24	174.3	173.4	1.75	194.9	209.0
13 week	0.24	—	148.9	1.75	—	191.8
26 week	0.24	—	120.5	1.75	—	158.6
10. *vindi*	(c.v. between household = 77.6%)			(c.v. between household = 86.5%)		
day	0.07	422.7	435.5	0.52	430.8	438.5
week	0.07	298.6	298.1	0.52	306.5	313.4
2 week	0.07	275.1	273.6	0.52	289.0	294.9
4 week	0.07	262.3	257.3	0.52	267.9	270.1
13 week	0.07	—	195.7	0.52	—	214.9
20 week	0.07	—	137.6	0.52	—	147.9
11. *onion*	(c.v. between household = 94.9%)			(c.v. between household = 103.0%)		
day	0.11	184.2	209.9	0.68	213.2	235.3
week	0.11	113.9	146.1	0.67	139.1	170.1
2 week	0.11	101.3	137.8	0.67	129.7	163.0
4 week	0.11	92.3	130.1	0.67	123.5	154.8
13 week	0.11	78.7	116.7	0.67	110.8	139.2
20 week	0.11	39.3	99.8	0.67	57.9	109.6

TABLE 11 (contd.). COEFFICIENTS OF VARIATION (TRUE) AT DIFFERENT STAGES IN
SAMPLING WITH HOUSEHOLDS SELECTED IN THE FIRST STAGE WITH VARYING
SIZE OF TIME UNITS (ACCOUNTING) IN THE SECOND STAGE

time-units (accounting period) in the second stage within household		per capita per day			per household per day		
		mean in chhatacks	coefficient of variation		mean in chhatacks	coefficient of variation	
			within household	total		within household	total
(1)		(2)	(3)	(4)	(5)	(6)	(7)
12. *cauliflower*		(c.v. between household = 86.9%)			(c.v. between household = 125.0%)		
	day	0.04	576.5	583.4	0.32	575.0	587.5
	week	0.04	389.0	383.9	0.32	412.2	431.2
	2 week	0.04	343.8	338.9	0.32	385.3	402.9
	4 week	0.04	—	302.9	0.32	360.3	376.2
	13 week	0.04	—	223.1	0.32	—	277.3
	26 week	0.04	—	149.5	0.32	—	184.8
13. *sugar*		(c.v. between household = 210.2%)			(c.v. between household = 182.0%)		
	day	0.08	230.7	319.2	0.50	200.0	270.0
	week	0.08	93.0	234.6	0.50	114.2	214.4
	2 week	0.08	80.9	228.7	0.50	102.8	207.6
	4 week	0.08	71.4	223.3	0.50	94.6	203.1
	13 week	0.07	67.3	217.7	0.50	90.2	197.8
	26 week	0.07	46.3	214.3	0.50	69.8	188.7
14. *gur*		(c.v. between household = 116.2%)			(c.v. between household = 198.2%)		
	day	0.13	273.7	296.7	1.12	255.4	322.3
	week	0.13	127.0	189.9	1.12	152.3	248.3
	2 week	0.13	111.5	174.8	1.12	139.5	240.1
	4 week	0.13	99.5	163.3	1.12	127.2	232.3
	13 week	0.13	94.8	144.4	1.12	113.0	220.7
	26 week	0.13	77.8	130.2	1.12	98.7	210.0
15. *salt*		(c.v. between household = 24.7%)			(c.v. between household = 49.7%)		
	day	0.29	25.8	37.2	1.87	27.8	55.6
	week	0.29	28.6	31.2	1.88	23.9	53.3
	2 week	0.29	22.2	30.2	1.88	20.7	52.8
	4 week	0.29	18.6	29.2	1.88	18.6	52.3
	13 week	0.29	15.0	27.9	1.88	16.5	51.6
	26 week	0.28	14.5	27.0	1.87	14.0	50.7

TABLE 12. COEFFICIENTS OF VARIATION (TRUE) AT DIFFERENT STAGES IN SAMPLING
WITH TIME UNITS (CALENDAR) SELECTED IN THE FIRST STAGE WITH DIFFERENT
HOUSEHOLDS IN THE SECOND STAGE

items	mean in chhataoks	'days' in the first stage with household-day in the second stage			'week' in the first stage with household-week in the second stage		
		true coefficient of variation			true coefficient of variation		
		between day	within day between household	total	between week	within week between household	total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		scale : per capita per day					
1. meat	0.11	232.7	498.1	531.1	121.4	206.3	239.3
2. edible oil	0.16	20.0	75.2	78.4	11.1	50.8	53.1
3. milk	0.54	35.0	243.0	261.0	39.1	170.8	176.0
4. potato	0.47	88.9	121.9	151.2	88.6	89.3	123.7
5. kumra	0.12	114.2	523.3	527.4	117.0	257.4	290.1
6. kachu	0.11	122.7	356.6	392.8	117.4	207.7	246.6
7. brinjal	0.24	138.8	209.1	254.0	137.8	139.6	191.8
8. vindi	0.07	190.0	389.3	435.5	185.6	246.1	298.1
9. onion	0.11	48.2	202.2	209.9	46.8	141.1	148.1
10. cauliflower	0.04	217.5	542.2	583.4	209.0	336.2	383.9
11. gur	0.13	71.5	829.3	296.7	54.8	153.5	189.9
		scale : per household per day					
1. meat	0.78	264.4	588.3	639.7	127.5	245.6	276.0
2. edible oil	1.24	51.8	99.2	112.1	11.8	86.8	87.1
3. milk	4.44	38.4	219.6	231.6	36.6	203.8	205.8
4. potato	3.20	87.4	161.9	183.8	87.5	131.2	157.0
5. kumra	0.85	129.3	525.9	541.2	122.8	285.5	310.6
6. kachu	0.80	133.9	423.8	443.8	125.8	269.5	297.8
7. brinjal	1.74	131.6	295.4	285.1	131.4	184.0	225.1
8. vindi	0.52	191.1	394.2	436.5	188.6	253.6	313.4
9. onion	0.08	55.3	229.4	235.3	55.8	162.7	170.1
10. cauliflower	0.32	215.1	546.9	587.5	205.7	373.8	431.2
11. gur	1.12	66.4	316.1	322.3	51.3	243.7	248.3

TABLE (13). GRADUATED COEFFICIENTS OF VARIATION (TRUE) OBTAINED BY A DOUBLE LOGARITHM FIT OF THE OBSERVED COEFFICIENT (c) ON SIZE OF SAMPLING UNIT (z)

(scale : per capita per day)

items	mean in chhatak per capita per day	least square fit in the form		size of accounting period (ultimate unit) with selected household						
		a	g	day	week	2 weeks	4 weeks	13 weeks	26 weeks	52 weeks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
					(a) within household					
1. cereals	9.95	16.4	0.199	16	11	10	8	7	6	—
2. dal	0.77	46.6	0.233	47	30	25	21	16	14	—
3. meat	0.11	640.0	0.567	640	212	143	97	50	33	—
4. edible oil	0.17	73.4	0.366	73	36	28	22	14	11	—
5. milk	0.53	180.1	0.141	180	137	124	112	95	86	—
6. potato	0.46	136.2	0.072	136	118	113	107	98	94	—
7. kumra	0.11	501.9	0.271	502	296	245	203	148	122	—
8. kachu	0.11	377.1	0.224	377	244	209	179	137	118	—
9. brinjal	0.23	242.2	0.108	242	198	182	169	149	138	—
10. vindi	0.07	414.3	0.148	414	310	280	253	212	191	—
11. onion	0.11	194.6	0.255	195	118	99	83	62	52	—
12. cauliflower	0.04	575.3	0.197	575	392	342	298	236	206	—
13. sugar	0.07	192.0	0.276	192	112	93	77	55	46	—
14. gur	0.13	228.8	0.222	229	148	127	109	84	72	—
15. salt	0.28	29.9	0.134	30	23	21	19	16	15	—
					(b) total					
1. cereals	9.95	26.1	0.042	26	24	23	23	22	21	20
2. dal	0.77	55.4	0.095	55	46	43	40	36	34	32
3. meat	0.11	496.7	0.370	497	242	187	145	93	72	56
4. edible oil	0.17	58.5	0.058	59	52	50	48	45	43	42
5. milk	0.53	238.4	0.103	238	195	182	169	150	139	130
6. potato	0.46	149.0	0.081	149	127	120	114	103	98	92
7. kumra	0.11	528.7	0.281	529	306	252	207	149	123	101
8. kachu	0.11	389.4	0.215	389	255	221	190	148	127	109
9. brinjal	0.23	256.1	0.132	256	198	181	166	141	129	118
10. vindi	0.07	455.5	0.204	456	306	266	231	182	158	137
11. onion	0.11	201.9	0.133	202	156	142	130	111	101	92
12. cauliflower	0.04	621.1	0.245	621	386	326	275	206	174	147
13. sugar	0.07	292.2	0.071	292	255	242	231	212	202	193
14. gur	0.13	274.6	0.150	275	205	185	166	139	126	113
15. salt	0.28	36.0	0.059	36	32	31	30	28	26	25

5. MODEL SCHEME FOR A MULTIPURPOSE SAMPLING

5.0. *Decision regarding the sample size*. In any field enquiry by the inter-view method through households, nett enumeration time required for the actual filling of schedules is small in relation to the expenditure, in terms of total time. During the enumerations, information relating to additional items can usually be collected at a marginal cost along with the basic items of information. The usual consideration in such situations is to take a decision, as to what precision must be achieved for one particularly important item, or for the aggregate over some or all the items. For instance, in an enquiry on the consumption of food items, the con-sideration may be to ensure, say, 5% error of the estimate for "total cereals", this being the major and a crucial item in the food sector. The decision may also be to estimate the total food consumption within a margin of error, let us say of 1%. Whatever be the criterion adopted for choosing the sample size, it is obvious that the margin of error for the other items in the schedule may in consequence come up as too high which cannot be helped or too low than is really necessary. It is generally impracticable to have separate item-specific enquiries.

5.0.1. Utilising the results obtained by analysing the variability of the different food items into the respective stage components, the following schemes illustrating the relative efficiencies of (1) unistage sampling, (2) two-stage (a) with household in the first stage (b) with calendar-time-units in the first stage. These are being discussed in paras 5.1 and 5.2.

5.1. *Unistage sampling*. Table 15 gives the expected variabilities of the estimated consumption rates for non-cereal items on the basis of a unistage sample of such size as would estimate the per capita per day consumption of cereals with a percentage variability of 1%. These have been worked out on the graduated co-efficients of total variation given in Table 14(b). This has been done separately for each size of the sampling unit, namely, a day, 1-week, 2-week, 4-week, etc. using the graduated coefficients of 'total' variation obtained from the fitted function $c = a(x)^{-\theta}$ as given in Table 14. It will be seen that substantial gain in field cost is made by increasing the size of sampling units, 675 household-*day* units being equivalent to 415 household-year units for cereals, both estimating with a margin of error of 1%. It may also be noted that a reduction in the sample size accompanied by an increase in the size of ultimate sampling unit (so as to give a constant margin of error of one per cent for cereals) substantially reduces the resultant percentage variability for the seasonal vegetables like kumra, cauliflower, etc. The corresponding margin of standard error for salt is higher but remains peculiarly steady, running parallel to those for cereals. This indicates that the consumption of salt is considerably linked up with the consumption of cereals, i.e. the consumption of cereals and salt are highly correlated.

TABLE 15. PERCENTAGE VARIABILITY OF DIFFERENT FOOD ITEMS BASED ON A COMMON
SAMPLE (UNISTAGE) OF SUCH SIZE AS WOULD ESTIMATE THE PER CAPITA PER
DAY CONSUMPTION RATE FOR CEREAL, WITH A P.V. OF 1%.

item	p.v. under different time-units						
	day $(n=675)$	week $(n=575)$	2 week $(n=550)$	4 week $(n=525)$	13 week $(n=475)$	26 week $(n=425)$	52 week $(n=415)$
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. total cereals	1.00	1.00	1.00	1.00	1.00	1.00	1.00
2. dal	2.15	1.90	1.75	1.70	1.65	1.65	1.55
3. meat	19.10	10.10	7.65	6.05	4.30	3.50	2.70
4. edible oil	2.25	2.20	2.05	2.00	2.05	2.10	2.00
5. milk	9.20	8.15	7.40	7.05	6.85	6.75	6.30
6. potato	5.75	5.30	4.90	4.75	4.75	4.75	4.45
7. kumra	20.35	12.75	10.30	8.65	6.85	5.95	4.90
8. kachu	15.00	10.70	9.00	7.95	6.75	6.15	5.30
9. brinjal	9.85	8.25	7.40	6.90	6.50	6.25	5.70
10. vindi	17.55	12.80	10.85	9.65	8.35	7.05	6.65
11. onion	7.75	6.50	5.80	5.40	5.10	4.90	4.45
12. cauliflower	23.90	16.10	13.30	11.75	9.45	8.45	7.10
13. sugar	11.25	10.60	9.90	9.60	9.75	9.80	9.35
14. gur	10.55	8.55	7.55	6.85	6.40	6.10	5.50
15. salt	1.40	1.35	1.25	1.25	1.25	1.30	1.25

5.2. *Two-stage sampling.* It will be interesting to compare and examine the relative merits of a two-stage sampling with (a) households selected in the first stage and having repeated visits to each on random dates, (b) time-units selected in the first stage, and confining the survey on those dates only for independent samples of households. The 'true' coefficients of variability in a two-stage sampling with households selected in the first stage and household-day, household-week etc. in the second stage, has been given in Table 11 for the fifteen items and the same with time-units ('day' or 'week') selected in the first stage and household-days selected in the second stage have been given in Table 12 for eleven of the items. The percentage variability c of the mean rate of consumption for a particular item was then obtained as

$$C = \sqrt{\frac{C_1^2}{n_1} + \frac{C_2^2}{n_1 n_2}}$$

where, C_1 and C_2 indicate the true coefficients of variation in the first and second stages of sampling, n_1 is the number of first stage units in the sample, n_2 is the number of second stage units per unit in the first stage.

The relative achievements of a few model schemes have been given in Table 16 for illustrative purposes. A total of 6000 household-visits representing the level of

TABLE 16. PERCENTAGE VARIABILITY OF THE ESTIMATED CONSUMPTION RATES
BASED ON A TOTAL WORK LOAD OF 6000 HOUSEHOLD-VISITS IN THE FIELD,
DISPOSED IN DIFFERENT SAMPLING SCHEMES.

	two-stage				unistage with 6000 household-days enumerated at random
item	p.v. of the estimated rate of consumption				
	with household selected in the first stage and days in the second stage		with 'days' selected in the first stage and household in second stage		
	4 visits in the year in each of 1500 household	12 visits in the year in each of 500 household	25 households in each of 240 days in the year	50 households in each of 120 days in the year	
(1)	(2)	(3)	(4)	(5)	(6)
1. meat	8.5	9.0	16.3	22.2	6.4
2. edible oil	1.4	2.0	1.6	2.1	0.8
3. milk	4.1	6.3	3.0	4.5	3.1
4. potato	2.3	3.1	6.0	8.3	1.9
5. kumra	6.8	7.5	10.0	12.4	6.8
6. kachu	5.2	5.7	9.2	12.1	5.0
7. brinjal	3.4	4.0	9.4	13.0	3.3
8. vindi	5.7	6.4	13.2	18.1	5.0
9. onion	3.5	4.9	4.1	5.1	2.6
10. cauliflower	7.8	8.4	15.7	21.0	8.0
11. gur	4.2	6.0	5.9	7.5	3.6

field cost but disposed in different ways, has been uniformly adopted in all the alternative arrangements and percentage variabilities of the final Mean achieved by each may be compared.

(a) *Households in the first stage*. Columns (2) and (3) give the percentage variabilities of the annual averages when households are selected in the first stage and the 6000 households visits are made up of (i) 4-visits at random to each of 1500 households, (ii) 12-visits at random to each of 500 households, (i.e., a monthly and a quarterly revisit on an average, of the same set of households within a year).

(b) *Calendar dates in the first stage.* Columns (4) and (5) on the other hand give the results for a two-stage scheme in which a number of 'dates' are selected at random out of all days in the year, and then on each day, a random set of households are selected in the second stage covering (i) 25 households in each of 240 days in the year, (ii) 50 households in each of 120 days in the year. In both the scheme the ultimate sampling unit, i.e., accounting period is one household-day. Two points emerge from an examination of Table 16, which may be considered as important. Firstly, a reduction in the number of households selected in the first stage (with a corresponding increase in revisits per household) produces a relatively small increase in the p.v. for all the items. This is due to the fact that the coefficients of variation in the second stage namely 'within household between household-days' are very large and much larger than the c.v. in the first stage. Since the total number of second stage, i.e., ultimate units have been kept constant (at 6000 household-days), contribution of the second stage to error of the Grand Mean remains the same whatever be the inter-stage disposal of the ultimate units. This variability being much greater, a steady contribution from this component plus a relatively smaller (but variable) contribution from the first state does not produce much difference. It will also be found that the percentage errors based on two stage sampling with 'days' selected in the first stage, are generally larger compared to those obtained with households selected in the first stage. Also, an unistage sampling of these characters are only slightly more efficient than the two stage sampling scheme, as will be evident by comparing column (6) with columns (2)-(5) of Table 16.

6. USE OF CONCOMITTANT VARIATES IN THE ESTIMATION OF GRAIN CONSUMPTION

6.0. The most important of the several food items examined here, is total cereals or perhaps total 'grains' (including *dal*). The difficulties of ascertaining unbiased consumption figures for food grains by the interview method of enumeration is very much talked of these days. It is generally believed (though our results discussed in an earlier paper does not corroborate it), that consumption for the basic items are very often exaggerated. Whatever be the real position, a correct ascertainment of this consumption has undoubtedly to be regarded as very important. It may be worthwhile, to examine the possiblities of using auxiliary correlated characters in a double sampling scheme, with a two-fold object, namely, (a) to reduce the cost of the field work, (b) to improve the quality of ascertainment. For an enquiry into the consumption of grains (y), a relatively large sample (N) may be confined to an auxiliary character, say 'salt' (x_1) which is highly correlated with grains while having only a small sample (n) where consumption of the correlated character along with the consumption of grains is to be ascertained. It would be worthwhile to try out an additional concomittant character (x_2), size of household for instance, which would give a higher correlation coefficient $R'_{y.x_1x_2}$. The mutual correlation coefficients between (1) consumption of grains, (2) consumption of salt and (3) size of household along with the multiple correlation coefficient have been worked out on the following units : (a) per year per household ; (b) per month per household and the results are being given below :

89

12

TABLE 17. COEFFICIENTS OF MUTUAL CORRELATION BETWEEN DIFFERENT ITEMS OF CONSUMPTION

items	grains	salt	household size group	
(1)	(2)	(3)	(4)	
(a) scale : per household year			unit : household year $n = 60$	
1. grains (y)	—	0.9331	0.9189	$r_{yx_1 \cdot x_2} = 0.7334$
2. salt (x_1)	0.9331	—	0.8493	$R_{y \cdot x_1 x_2} = 0.0635$
3. household size group (x_2)	0.9189	0.8493	—	
(b) scale : per household month			unit : household month $n = 780$	
1. grains (zy)	—	0.9928	0.9202	$r_{yx_1 \cdot x_2} = 0.7584$
2. salt (x_1)	0.8828	—	0.7438	$R_{y \cdot x_1 x_2} = 0.0668$
3. household size group (x_2)	0.9020	0.7438	—	

6.1. It will be seen that the correlation coefficients are somewhat higher with household-year as units in comparison to the same when household-month is taken as the unit. The multiple correlation coefficients $R_{y \cdot x_1 x_2}$, and partial correlation coefficients $r_{yx_1 \cdot x_2}$ which are considerable have also been worked out in each case. Use of 'salt' and 'household-size' as concomittant variates for the estimation of grains consumption seems to have some prospects.

6.2. It may be recalled here that the household size was reckoned as the effective number of members in the household partaking meal on individual days and the weekly, monthly or annual totals of net consuming-man-days were taken as the corresponding size of household which were to be correlated with the consumption rate. This variable size of household is expected to be more closely correlated than a fixed household size (by an initial census) with consumption rates. In actual practice, it will not generally be possible however to ascertain the effective man-days of consumption for an accounting period comprising a large number of days.

6.3. The advantages of being able to estimate the average rate of consumption at the desired level of sampling precision with a relatively smaller size of sample is obvious. While there will be considerable saving of time and labour in the field where, the consumption of subsidiary character like 'salt' only is to be ascertained, it becomes at the same time easier to concentrate on the principal character in a limited number of households by much deeper probing and if necessary by actually weighing out the quantities that are going to be consumed on any particular day. Appendix Table A.5 gives the mutual two-way frequency distributions between consumption of total grains, salt and the size of household (consuming man-days) among themselves.

7. IMPORTANT OBSERVATIONS

7.0. An increase in the size of sampling unit by increasing the accounting period, produces a considerable reduction in the coefficient of variability, specially in items with large seasonal variations. For 'cereals' the coefficient of total variability falls from 26% with household-day units to 20% with household year units, or a reduction of 23%. The non-leafy vegetable items under this study undergo a reduction in c.v. varying from 29% to 89% for similar increase in the size of single unit.

7.1. So far as the sampling error of consumption rates for these items is concerned, a two-stage sampling with households selected in the first stage with re-visits of the same is not often very much inferior to an unistage sampling where household-days are directly and independently selected each time. This is because "within household" variances (true) are usually large compared to the "between household" variance (true) but of the same order as the 'unistage, i.e., total variance. While it may be operationally inconvenient to carry out a unistage sampling over total household-days in the region over the year, the two stage sampling has also some of its difficulties. Contacting previously visited household a second or third time in the course of a year is certainly convenient and saves time unless we consider how much irritation is given to the interviewed. A new and unknown household to be visited each time on the other hand keeps the investigator more on the alert, and sharpen his interests. Improvement may be expected by a planned rotation of the investigating staff effecting a compromise between convenience and safety.

7.2. For some of the items which have large seasonal fluctuations, it is possible to sample with calendar time as the first stage of selection within which household-days (or any other accounting period) could be selected at random. The "between day" variance (true) are usually found to be much larger compared to be "between household" variance (true). The total number of calendar-time units in the year, namely, the calendar-days, the calendar-weeks, etc., are however very limited and the number of such first stage units can never be made large unless with serious repetitions and thus with loss of information.

7.3. There seem to be some prospects for utilising concomittant characters for improving the estimation of consumption rates. Salt and oil are to have considerable correlation with the consumption of total cereals or total grains. It is possible, thus, to plan a scheme with a relatively small sample for collecting data on the consumption of cereals (or grains) with deeper probing or by actual measurements along with a larger sample where the independent variate, say 'salt' only is investigated. This may be helpful in reducing the sample size and hence the quality of the data and also in by-passing the psychological obstructions, if any, in respect of particular items.

7.3.1. The use of concomittant characters should also be found to be helpful in the stage of data collection and in apprising the consistency of the collected data. Correlation coefficients computed for smaller batches, by regional or by investigator-wise breakdowns, may reveal over-looked inconsistencies or even arbitrariness in filling up of schedule.

Appendix

TABLE A.1. DISTRIBUTION OF HOUSEHOLD (BUILT UP FROM DAILY CONSUMPTION
DATA) WEEKS BY LEVEL OF WEEKLY CONSUMPTION IN CHHATACKS PER HOUSE-
HOLD FOR DIFFERENT FOOD ITEMS IN 4-WEEK MONTHS,
GIRIDIH, JUNE 1953—MAY 1954

consumption in chhatacks per household	4-week months													all month
	-28 June	-26 July	-23 Aug.	-20 Sept.	-18 Oct.	-15 Nov.	-13 Dec.	-10 Jan.	-7 Feb.	-7 Mar.	-4 April	-2 May	-30 May	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
item : total cereals														
1— 64	1	1	1	—	2	4	2	—	—	1	1	2	4	19
— 128	5	7	6	4	2	—	3	5	4	4	7	5	2	54
— 192	23	19	22	15	18	20	17	19	18	18	17	19	28	252
— 256	26	20	27	23	23	13	22	33	36	35	34	39	32	365
— 320	21	25	24	37	31	20	31	46	43	40	46	39	33	436
— 384	52	52	36	46	44	57	43	26	34	33	34	31	43	533
— 448	10	7	14	4	13	16	8	14	12	16	11	11	13	149
— 512	28	20	21	18	20	16	19	15	21	17	16	15	12	236
— 576	11	18	21	25	12	15	14	15	5	16	6	9	7	174
— 640	8	11	11	11	14	7	6	7	14	8	13	13	16	139
— 720	24	21	13	9	18	17	25	21	12	17	13	13	14	217
— 800	6	9	9	9	7	12	12	3	6	4	6	7	9	44
— 880	8	7	13	16	14	14	9	7	10	9	11	17	11	146
— 960	1	5	4	1	3	7	2	5	3	2	3	2	3	41
—1120	5	4	5	9	11	5	9	5	7	6	13	8	7	98
—1280	3	7	5	5	2	6	3	11	11	7	5	6	7	78
—1420	4	4	3	4	5	4	4	4	2	1	—	—	1	36
—1580	3	1	3	3	1	2	5	2	2	2	3	4	1	32
1581 & above	1	2	—	1	—	3	6	2	—	2	2	—	2	20
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120
item : dal														
00	—	1	—	1	—	1	1	3	6	3	—	—	2	18
0.1— 4.0	4	1	4	3	3	1	2	6	6	7	3	—	1	41
— 8.0	8	7	10	5	9	14	6	10	19	12	8	6	20	134
— 12.0	12	14	19	11	19	12	12	15	19	10	23	22	15	212
— 16.0	20	21	15	20	25	17	18	33	30	33	32	29	16	308
— 20.0	19	14	23	15	22	22	21	20	24	19	22	24	23	268
— 24.0	18	18	21	29	19	19	21	23	25	20	23	31	29	300
— 28.0	24	20	29	33	18	27	32	21	26	32	23	33	33	350
— 32.0	13	14	13	19	14	12	9	11	7	12	15	11	20	170
— 40.0	22	21	14	18	24	29	17	29	20	18	16	13	13	254
— 48.0	26	26	22	14	16	11	20	11	8	11	17	13	14	209
— 64.0	37	44	30	34	37	34	37	20	21	24	27	30	27	402
— 80.0	17	13	13	9	10	13	10	13	13	13	11	9	4	148
— 96.0	11	16	17	18	13	8	16	12	7	11	7	9	15	160
—112.0	5	6	9	6	7	16	9	3	2	2	5	5	4	79
—128.0	2	—	2	1	2	2	5	1	3	—	—	2	—	20
—144.0	2	3	—	—	2	1	1	4	3	3	5	4	3	31
—160.0	—	1	—	2	—	1	2	2	1	1	—	—	1	11
160.1 & above	—	—	—	2	—	—	1	1	—	—	1	—	—	5
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120

TABLE A.1 (contd.). DISTRIBUTION OF HOUSEHOLD (BUILT UP FROM DAILY CONSUMPTION DATA) WEEKS BY LEVEL OF WEEKLY CONSUMPTION IN CHHATACKS PER HOUSEHOLD FOR DIFFERENT FOOD ITEMS IN 4-WEEK MONTHS, GIRIDIH, JUNE 1953-MAY 1954

consumption in chhatakc per household	4-week months													
	-28 June	-26 July	-23 Aug.	-20 Spet.	-18 Oct.	-15 Nov.	-13 Dec.	-10 Jan.	-7 Feb.	-7 Mar.	-4 April	-2 May	-30 May	all month
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)

item : meat

00.0	157	161	188	185	158	209	188	202	175	201	178	184	183	2369
0.1— 4.0	6	5	7	5	4	1	5	2	2	—	7	3	6	53
— 8.0	24	23	9	16	11	7	12	13	11	12	18	17	14	187
— 12.0	8	9	4	2	4	2	6	3	12	4	6	4	2	66
— 16.0	25	16	18	13	10	11	15	10	20	10	10	10	19	189
— 20.0	4	2	1	1	1	—	—	—	2	1	—	2	3	17
— 24.0	6	2	3	5	2	2	5	3	5	4	5	4	3	49
— 28.0	1	1	2	—	1	—	—	1	2	—	—	—	2	10
— 32.0	4	5	2	3	9	3	1	2	4	—	8	7	6	57
— 36.0	—	—	—	1	1	2	—	—	1	1	1	—	—	6
— 40.0	1	1	1	—	5	1	1	1	2	1	3	1	—	18
— 48.0	2	1	1	4	6	2	4	—	1	2	—	3	—	26
— 56.0	—	4	1	1	5	—	—	1	—	1	2	2	—	17
— 64.0	2	3	—	1	6	—	—	—	2	—	—	2	1	17
— 72.0	—	1	—	1	2	—	—	—	—	—	2	—	—	6
— 80.0	—	3	—	—	2	—	—	1	1	1	—	—	—	8
— 96.0	—	1	2	—	7	—	—	—	—	2	—	1	1	14
112.0	—	2	—	—	2	—	—	—	—	—	—	—	—	4
112.1 & above	—	—	1	—	4	1	—	1	—	—	—	—	—	7
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120

item : edible oil

00.0	1	1	1	—	—	—	—	—	—	—	—	—	1	4
0.1— 2.0	9	17	14	15	10	10	14	12	15	18	19	18	16	187
— 4.0	55	73	79	77	65	89	91	94	88	87	64	77	77	1016
— 6.0	32	16	13	20	24	26	17	22	25	23	23	19	24	284
— 8.0	59	38	51	53	45	42	34	40	41	46	42	52	59	596
—10.0	11	13	11	8	12	10	17	13	3	5	14	13	9	139
—12.0	12	9	11	7	12	7	15	7	12	11	9	8	11	131
—14.0	17	21	24	12	20	17	13	14	14	15	21	20	23	231
—16.0	9	10	7	6	8	13	17	10	7	8	12	10	9	126
—18.0	8	13	4	11	11	11	5	8	8	4	6	3	4	96
—20.0	6	8	6	5	8	3	5	4	2	2	2	2	3	57
—22.0	8	9	11	9	9	2	3	5	8	12	8	9	2	95
—24.0	—	1	3	3	1	—	1	1	1	—	7	2	2	22
—28.0	6	4	2	9	9	3	4	5	7	5	4	3	2	63
—32.0	3	2	1	2	1	3	2	—	2	2	4	1	—	23
—46.0	3	3	1	3	4	4	2	4	2	2	5	3	7	43
48.1 & above	1	2	1	—	1	—	2	—	—	—	—	—	—	7
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120

TABLE-A.1 (contd.). DISTRIBUTION OF HOUSEHOLD (BUILT UP FROM DAILY CONSUMPTION
DATA) WEEKS BY LEVEL OF WEEKLY CONSUMPTION IN CHHATACKS PER
HOUSEHOLD FOR DIFFERENT FOOD ITEMS IN 4-WEEK MONTHS,
GIRIDIH, JUNE 1953–MAY 1954

consumption in chhataks per household	4-week months													
	-28 June	-26 July	-23 Aug.	-20 Sept.	-18 Oct.	-15 Nov.	-13 Dec.	-10 Jan.	-7 Feb.	-7 Mar.	-4 April	-2 May	-30 May	all month
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)

item : milk

00.0	138	141	105	94	106	101	121	133	153	160	133	151	140	1676
0.1— 8.0	13	16	17	19	15	24	11	19	14	8	20	12	16	204
— 16.0	13	11	15	14	8	8	11	6	—	12	15	13	10	136
— 24.0	4	5	9	5	9	9	2	5	3	3	4	3	11	72
— 32.0	13	13	31	20	15	9	13	17	15	9	22	27	27	231
— 40.0	2	2	5	5	2	1	4	1	2	3	2	4	9	42
— 48.0	5	5	3	3	4	5	2	6	9	6	8	6	6	68
— 56.0	18	17	14	21	29	31	30	15	19	16	10	7	7	234
— 64.0	1	2	6	8	5	3	—	5	1	1	1	2	1	36
— 72.0	—	—	2	—	2	4	2	2	2	—	5	2	—	23
— 80.0	2	—	2	2	1	2	3	9	2	2	—	1	—	25
— 96.0	1	5	7	10	10	8	12	5	6	4	3	1	—	72
—112.0	14	7	7	11	6	11	12	7	6	11	13	9	5	119
—128.0	—	1	2	3	1	4	3	1	4	2	3	—	3	27
—144.0	—	1	2	4	4	5	4	3	—	—	—	1	—	24
—160.1	1	—	—	—	1	1	1	1	—	—	—	—	1	6
—192.0	1	2	—	2	3	5	1	1	—	1	1	—	—	19
—224.0	4	1	—	4	10	3	1	4	4	3	—	1	4	39
—256.0	—	—	—	1	—	2	2	—	—	—	—	—	—	5
—320.0	2	5	3	3	4	3	—	—	—	—	—	—	—	20
—464.0	6	4	8	9	5	2	3	—	—	—	—	—	—	37
464.1 & above	—	2	2	2	—	—	—	—	—	—	—	—	—	6
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120

item : potato

00.0	89	135	136	107	186	176	111	12	2	5	7	24	56	1136
0.1— 4.0	20	25	22	9	11	16	23	13	8	2	5	18	39	211
— 8.0	29	24	20	11	19	17	27	13	6	3	8	26	23	226
— 12.0	18	8	12	3	4	10	13	8	3	6	13	15	18	131
— 16.0	23	10	12	6	8	8	10	19	15	15	18	17	11	187
— 20.0	8	9	11	5	—	2	10	16	7	13	14	14	15	124
— 24.0	8	11	11	3	3	3	6	18	12	15	16	18	13	137
— 28.0	7	4	2	2	2	1	9	21	15	20	20	18	10	131
— 32.0	9	3	1	2	1	2	4	19	23	20	22	18	12	136
— 48.0	22	2	11	1	3	2	6	46	59	61	45	31	14	303
— 64.0	2	2	1	—	3	2	9	20	28	27	23	19	11	147
— 80.0	2	4	1	1	—	1	3	11	18	14	15	8	4	82
— 96.0	1	3	—	—	—	—	—	3	8	11	9	3	3	41
—112.0	2	—	—	—	—	—	—	7	8	8	7	6	2	40
—128.0	—	—	—	—	—	—	—	3	5	3	3	2	1	17
—144.0	—	—	—	—	—	—	—	2	5	1	1	—	1	10
—160.0	—	—	—	—	—	—	—	5	1	3	2	—	1	12
161.1 & above	—	—	—	—	—	—	—	4	17	13	12	2	1	49
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120

TABLE A.1 (*contd.*). DISTRIBUTION OF HOUSEHOLD (BUILT UP FROM DAILY CONSUMPTION DATA) WEEK BY LEVEL OF WEEKLY CONSUMPTION IN CHHATACKS PER HOUSEHOLD FOR DIFFERENT FOOD ITEMS IN 4-WEEK MONTHS, GIRIDIH; JUNE 1953–MAY 1954

consumption in chhatacks per household	4-week months													
	-28 June	-26 July	-23 Aug.	-20 Sept.	-18 Oct.	-15 Nov.	-13 Dec.	-10 Jan.	-7 Feb.	-7 Mar.	-4 April	-2 May	-30 May	all month
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)

item : kumra

00.0	193	220	225	220	167	95	155	190	213	231	225	225	105	2554
0.1— 2.0	2	—	—	—	1	—	—	—	—	—	—	—	—	3
— 4.0	1	—	2	1	—	1	1	—	1	1	1	1	2	12
— 6.0	1	—	1	—	—	—	—	2	—	1	—	—	—	5
— 8.0	8	7	2	2	11	12	10	7	3	—	2	2	8	74
— 10.0	1	—	—	1	1	—	—	1	—	—	—	1	1	6
— 12.0	1	1	1	—	3	1	1	2	1	2	1	1	—	15
— 14.0	1	—	—	—	—	1	—	—	—	—	—	—	—	2
— 16.0	7	6	8	7	10	35	20	13	13	3	4	2	6	143
— 20.0	4	—	—	—	1	2	7	6	1	—	2	—	4	27
— 24.0	8	1	—	—	4	11	11	3	1	—	3	2	7	51
— 28.0	3	—	—	1	1	1	2	1	—	—	—	—	1	10
— 32.0	3	3	—	3	9	14	7	10	3	2	2	—	6	62
— 36.0	1	1	—	—	2	3	4	1	—	—	—	—	—	12
— 40.0	—	—	—	2	2	13	5	—	—	—	—	—	1	23
— 48.0	1	1	—	—	2	9	3	2	1	—	—	—	1	20
— 56.0	—	—	—	1	3	3	2	—	2	—	—	1	1	13
— 64.0	—	—	—	—	6	7	2	—	—	—	—	—	1	16
— 80.0	2	—	—	1	1	10	6	—	—	—	—	1	4	25
— 96.0	1	—	1	1	1	7	2	1	1	—	—	2	1	18
—112.0	2	—	—	—	2	5	1	—	—	—	—	1	—	11
—128.0	—	—	—	—	3	3	1	1	—	—	—	—	1	8
128.1 & above	—	—	—	—	1	7	—	—	—	—	—	1	1	10
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120

item : kachu

00.0	224	152	118	126	76	106	157	221	228	236	237	231	238	2351
0.1— 2.0	—	1	3	2	—	1	1	—	—	—	—	—	—	8
— 4.0	3	15	20	6	3	5	6	1	—	—	—	2	1	62
— 6.0	1	7	5	2	3	1	3	—	—	—	—	—	—	22
— 8.0	3	18	26	30	44	20	25	5	5	2	1	5	2	194
— 10.0	—	1	4	1	—	—	3	—	—	—	—	—	—	9
— 12.0	—	12	5	7	6	4	2	3	—	—	1	1	—	41
— 14.0	—	2	4	1	—	2	2	—	—	—	—	—	—	11
— 16.0	6	7	7	25	28	25	19	5	2	1	—	1	—	126
— 20.0	—	8	6	5	6	7	2	3	—	—	—	—	—	37
— 24.0	—	2	0	11	19	17	3	1	3	—	1	—	1	67
— 28.0	—	5	5	4	4	5	1	1	—	—	—	—	—	25
— 32.0	—	3	10	6	12	12	8	1	1	—	—	—	—	52
— 36.0	—	—	3	—	1	4	—	—	—	—	—	—	—	8
— 40.0	1	1	4	—	4	8	2	—	1	—	—	—	—	21
— 48.0	—	—	3	3	6	6	3	—	—	—	—	—	—	21
— 56.0	—	—	1	2	2	7	2	—	—	—	—	—	—	14
— 64.0	1	2	1	—	4	—	1	—	—	—	—	—	—	9
— 80.0	—	—	3	4	10	3	—	—	—	—	—	—	—	20
— 96.0	—	—	—	1	4	—	—	—	—	—	—	—	—	5
—112.0	1	—	—	1	2	—	—	—	—	—	—	—	—	4
—128.0	—	1	—	1	1	—	—	—	—	—	—	—	—	3
128.1 & above	—	3	—	1	5	1	—	—	—	—	—	—	—	10
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120

TABLE A.1 (contd.). DISTRIBUTION OF HOUSEHOLD (BUILT UP FROM DAILY CONSUMPTION DATA) WEEKS BY LEVEL OF WEEKLY CONSUMPTION IN CHHATACKS PER HOUSEHOLD FOR DIFFERENT FOOD ITEMS IN 4-WEEK MONTHS, GIRIDIH, JUNE 1953-MAY 1954

consumption in chhatacks per household	4-week months													
	-28 June	-26 July	-23 Aug.	-20 Sept.	-18 Oct.	-15 Nov.	-14 Dec.	-10 Jan.	-7 Feb.	-7 Mar.	-4 April	-2 May	-30 May	all month
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)

item : brinjal

00.0	230	238	239	239	234	215	123	40	29	28	93	176	208	2092
0.1— 2.0	—	—	—	—	—	—	4	1	1	4	2	2	1	15
— 4.0	6	1	1	1	—	2	8	6	5	5	15	12	3	65
— 6.0	—	—	—	—	—	1	4	1	2	1	1	3	3	16
— 8.0	3	—	—	—	3	12	22	13	8	10	16	8	4	99
—10.0	—	—	—	—	—	—	2	2	2	—	2	2	1	11
—12.0	—	1	—	—	—	1	5	5	5	15	8	1	1	42
—16.0	1	—	—	—	1	3	18	26	26	22	19	3	3	122
—20.0	—	—	—	—	2	—	9	22	11	12	7	2	2	67
—24.0	—	—	—	—	—	3	3	19	20	16	14	8	—	83
—28.0	—	—	—	—	—	—	5	7	13	11	4	3	4	47
—32.0	—	—	—	—	—	2	5	19	17	14	14	3	2	76
—40.0	—	—	—	—	—	—	7	21	18	20	7	4	1	78
—48.0	—	—	—	—	—	1	5	10	16	13	9	1	4	63
—64.0	—	—	—	—	—	—	6	17	21	21	16	5	3	89
—80.0	—	—	—	—	—	—	9	13	9	9	5	4	—	49
—96.0	—	—	—	—	—	—	2	10	12	12	2	—	—	34
—112.0	—	—	—	—	—	—	3	6	10	4	—	—	—	23
—128.0	—	—	—	—	—	—	—	1	8	4	1	2	—	16
—160.0	—	—	—	—	—	—	—	1	3	7	2	1	—	14
100.1 & above	—	—	—	—	—	—	—	—	2	10	3	—	—	15
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120

item : vindi

00.0	213	222	184	90	93	149	230	240	240	240	239	232	209	2583
0.1— 2.0	1	—	3	6	6	3	—	—	—	—	—	1	1	21
— 4.0	9	3	9	12	14	21	5	—	—	—	—	1	16	90
— 6.0	1	1	1	6	2	4	4	—	—	—	—	1	3	23
— 8.0	5	2	8	15	17	16	1	—	—	—	1	1	8	74
—10.0	2	3	1	4	3	3	—	—	—	—	—	—	—	16
—12.0	2	1	—	7	6	8	—	—	—	—	—	1	—	25
—16.0	2	1	4	16	13	12	—	—	—	—	—	—	1	49
—20.0	—	4	2	12	10	10	—	—	—	—	—	—	—	38
—24.0	—	1	—	10	16	4	—	—	—	—	—	—	—	31
—28.0	1	—	2	4	16	1	—	—	—	—	—	—	2	26
—32.0	—	1	—	15	19	2	—	—	—	—	—	—	—	37
—40.0	2	1	—	11	18	6	—	—	—	—	—	—	—	38
—48.0	1	—	11	12	4	1	—	—	—	—	—	—	—	29
—64.0	1	—	2	11	1	—	—	—	—	—	—	2	—	17
—80.0	—	—	6	6	—	—	—	—	—	—	—	1	—	13
—96.0	—	—	5	2	—	—	—	—	—	—	—	—	—	7
96.1 & above	—	—	2	1	—	—	—	—	—	—	—	—	—	3
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120

TABLE A.1 (contd.).   DISTRIBUTION OF HOUSEHOLD (BUILT UP FROM DAILY CONSUMPTION DATA) WEEKS BY LEVEL OF WEEKLY CONSUMPTION IN CHHATACKS PER HOUSEHOLD FOR DIFFERENT FOOD ITEMS IN 4-WEEK MONTHS, GIRIDIH, JUNE 1953–MAY 1954

consumption in chhatacks per household	4-week months													all month
	-28 June	-26 July	-23 Aug.	-20 Sept.	-18 Oct.	-15 Nov.	-13 Dec.	10 Jan.	-7 Feb.	-7 Mar.	-4 April	-2 May	-30 May	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
item : onion														
00.0	80	90	82	129	141	181	180	174	102	172	117	90	100	1707
0.1— 2.0	17	9	13	13	9	9	14	11	12	14	22	9	11	163
— 4.0	26	21	28	23	27	10	15	14	22	13	18	21	19	257
— 6.0	19	11	17	11	14	12	5	11	10	6	10	12	13	151
— 8.0	16	22	22	13	17	13	9	13	19	17	27	25	28	241
—10.0	11	10	5	9	—	1	1	5	3	5	11	14	8	83
—12.0	12	13	16	13	5	3	4	4	3	4	6	9	17	100
—14.0	18	10	9	7	12	6	8	5	4	5	5	12	14	115
—16.0	12	12	12	7	7	2	3	3	4	3	11	10	6	92
—20.0	12	14	11	7	3	—	1	—	1	1	1	2	9	62
—24.0	6	6	10	1	3	2	—	—	—	—	2	5	3	38
—28.0	4	6	6	3	—	1	—	—	—	—	4	7	1	32
—32.0	2	5	4	3	2	—	—	—	—	—	1	1	3	21
—40.0	5	6	1	1	—	—	—	—	—	—	2	8	4	27
—48.0	—	3	1	—	—	—	—	—	—	—	2	3	3	12
—56.0	—	2	2	—	—	—	—	—	—	—	1	3	1	9
56.1 & above	—	—	1	—	—	—	—	—	—	—	—	—	—	1
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120
item : cauliflower														
00.0	240	240	240	238	240	230	197	94	139	203	239	240	240	2789
0.1— 2.0	—	—	—	1	—	—	4	8	1	2	—	—	—	16
— 4.0	—	—	—	1	—	—	6	14	10	7	1	—	—	39
— 6.0	—	—	—	—	—	—	5	4	7	3	—	—	—	19
— 8.0	—	—	—	—	—	—	10	19	21	3	—	—	—	53
— 10.0	—	—	—	—	—	—	—	8	4	2	—	—	—	14
— 12.0	—	—	—	—	—	—	2	13	11	1	—	—	—	27
— 14.0	—	—	—	—	—	—	1	4	3	3	—	—	—	11
— 16.0	—	—	—	—	—	1	2	12	8	5	—	—	—	28
— 18.0	—	—	—	—	—	—	1	6	1	1	—	—	—	9
— 20.0	—	—	—	—	—	—	—	3	3	1	—	—	—	7
— 24.0	—	—	—	—	—	—	3	11	5	1	—	—	—	20
— 28.0	—	—	—	—	—	—	2	5	3	—	—	—	—	10
— 32.0	—	—	—	—	—	—	—	5	5	5	—	—	—	15
— 48.0	—	—	—	—	—	—	1	17	14	2	—	—	—	34
— 64.0	—	—	—	—	—	—	1	7	3	1	—	—	—	12
— 96.0	—	—	—	—	—	—	3	3	2	—	—	—	—	8
—112.0	—	—	—	—	—	—	2	5	—	—	—	—	—	7
112.1 & above	—	—	—	—	—	—	—	2	—	—	—	—	—	2
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120

13

TABLE A.1 (contd.). DISTRIBUTION OF HOUSEHOLD (BUILT UP FROM DAILY CONSUMPTION
DATA) WEEKS BY LEVEL OF WEEKLY CONSUMPTION IN CHHATACKS PER
HOUSEHOLD FOR DIFFERENT FOOD ITEMS IN 4-WEEK MONTHS,
GIRIDIH, JUNE 1953–MAY 1954

consumption in chhatacks per household	4-week months													
	-28 June	-26 July	-23 Aug.	-20 Sept.	-18 Oct.	-15 Nov.	-13 Dec.	-10 Jan.	-7 Feb.	-7 Mar.	-4 April	-2 May	-30 May	all month
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
						item : sugar								
00.0	138	153	158	148	151	151	153	174	177	175	159	155	140	2028
0.1— 1.0	8	8	14	5	6	7	6	9	6	7	14	7	12	109
— 2.0	22	19	13	12	8	12	12	8	8	3	12	13	18	160
— 3.0	3	3	2	3	2	4	4	1	1	1	1	0	2	33
— 4.0	17	15	9	16	14	12	7	3	10	10	14	5	0	141
— 5.0	4	3	1	7	1	7	4	4	3	2	6	2	4	48
— 6.0	5	5	5	3	6	7	2	2	4	4	7	6	5	60
— 7.0	2	3	6	4	8	6	8	6	2	3	1	7	3	59
— 8.0	9	8	7	7	2	4	6	3	1	5	5	3	3	63
—10.0	6	4	4	4	5	6	2	3	1	5	1	6	5	51
—12.0	5	2	8	2	4	1	1	1	—	1	7	2	7	41
—14.0	3	3	3	6	0	1	8	4	8	5	—	9	10	69
—16.0	2	2	—	6	—	5	4	4	1	1	2	2	3	32
—20.0	3	1	5	3	13	8	7	3	—	—	1	6	4	54
—24.0	5	4	3	9	6	2	1	2	5	1	4	3	7	52
—28.0	1	1	1	4	3	4	8	11	14	14	11	9	3	84
—32.0	3	2	—	—	1	2	2	1	—	1	1	1	2	16
—36.0	—	—	—	—	—	—	—	1	—	1	2	—	1	5
—40.0	—	—	—	—	—	1	—	—	—	—	—	—	1	2
40.1 & above	4	4	1	—	1	—	—	—	—	1	1	—	1	13
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120
						item : gur								
00.0	83	123	110	137	149	154	165	152	123	158	137	153	175	1830
0.1— 2.0	8	11	5	2	4	3	9	12	12	13	12	10	15	126
— 4.0	19	14	17	15	18	13	10	26	24	21	21	23	19	245
— 6.0	7	4	9	4	5	6	8	0	9	3	8	5	1	75
— 8.0	23	19	18	10	21	23	20	14	19	13	20	6	9	224
— 10.0	9	3	4	2	4	3	—	6	3	3	8	5	1	51
— 12.0	10	7	5	8	6	7	2	7	8	3	8	7	6	84
— 14.0	6	1	2	3	2	—	2	1	8	7	2	4	—	38
— 16.0	12	5	13	9	5	12	9	5	13	3	5	5	3	99
— 20.0	4	4	4	8	4	5	—	3	4	4	2	1	2	45
— 24.0	8	4	12	0	3	4	—	—	3	3	4	1	3	53
— 28.0	2	4	5	5	2	2	1	2	3	—	2	2	1	31
— 32.0	6	6	7	2	3	1	—	3	4	5	3	—	—	40
— 48.0	13	11	11	5	4	1	3	—	1	1	4	4	1	58
— 64.0	19	12	4	6	5	2	1	—	4	—	—	—	—	53
— 80.0	2	4	1	1	1	—	—	1	—	—	—	—	—	10
—112.0	3	6	3	3	2	4	1	1	2	1	1	—	1	28
112.1 & above	6	2	1	2	2	—	3	1	—	3	3	4	3	30
all levels	240	240	240	240	240	240	240	240	240	240	240	240	210	3120

TABLE A.1 (contd.). DISTRIBUTION OF HOUSEHOLD (BUILT UP FROM DAILY CONSUMPTION DATA) WEEKS BY LEVEL OF WEEKLY CONSUMPTION IN CHHATACKS PER HOUSEHOLD FOR DIFFERENT FOOD ITEMS IN 4-WEEK MONTHS. GIRIDIH, JUNE 1953–MAY 1954

consumption in chhatacks per households	4-weeks months													
	-28 June	-26 July	-23 Aug.	-20 Sept.	-18 Oct.	-15 Nov.	-13 Dec.	-10 Jan.	-7 Feb.	-7 Mar.	-4 April	-2 May	-30 May	all month
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)

item : salt

00.0	—	—	—	—	—	—	—	—	—	—	—	—	1	1
0.1— 2.0	1	—	—	—	—	—	—	1	—	—	1	—	3	6
— 4.0	5	6	9	9	10	15	17	15	11	9	14	18	19	157
— 6.0	8	6	8	9	4	6	9	12	4	8	9	8	11	102
— 8.0	58	64	60	53	43	41	40	54	70	71	64	54	46	706
—10.0	20	8	9	13	9	3	8	10	10	10	9	13	20	142
—12.0	16	8	27	19	22	26	22	22	32	23	33	29	24	303
—14.0	78	72	74	85	95	98	75	75	60	74	50	57	56	949
—16.0	18	23	14	12	19	9	18	8	11	3	10	9	7	161
—18.0	4	1	8	2	2	5	10	5	4	4	8	7	12	72
—20.0	1	6	5	2	—	—	10	3	3	1	3	3	6	43
—22.0	6	15	11	6	3	11	6	15	14	16	17	24	20	164
—26.0	4	4	—	2	7	5	3	4	4	3	2	1	1	40
—30.0	20	20	20	23	23	16	11	11	13	14	16	17	13	217
—34.0	1	1	2	3	3	2	2	1	2	—	1	—	1	19
—38.0	2	4	3	2	—	2	4	2	1	4	2	—	—	26
38.1 & above	—	2	—	—	—	1	5	2	1	—	1	—	—	12
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120

TABLE A.2. DISTRIBUTION OF HOUSEHOLD (BUILT UP FROM DAILY PURCHASE DATA) WEEKS BY LEVEL OF WEEKLY PURCHASE IN CHHATACKS PER HOUSE-HOLD FOR DIFFERENT FOOD ITEMS IN THIRTEEN 4-WEEK MONTHS, GIRIDIH, JUNE 1953–MAY 1954

purchase in chhatack per household	4-weeks months													
	-28 June	-26 July	-23 Aug.	-20 Sept.	-18 Oct.	-15 Nov.	-13 Dec.	-10 Jan.	-17 Feb.	-7 Mar.	-4 April	-2 May	-30 May	all month
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	item : toal cereals													
00	73	103	116	85	76	133	187	158	130	124	119	106	98	1508
1— 50	8	14	8	4	4	10	6	3	2	5	7	8	5	84
— 100	7	11	11	20	12	8	4	11	8	8	18	13	19	140
— 150	22	16	13	22	16	20	7	13	14	14	6	11	13	187
— 200	20	24	34	37	27	12	5	12	14	15	18	20	22	269
— 250	24	22	10	20	25	14	10	5	15	15	19	20	15	214
— 300	19	10	17	13	21	13	8	16	12	12	14	15	16	186
— 350	15	11	13	13	16	9	4	10	13	17	6	10	11	148
— 400	11	7	8	15	17	9	7	7	14	9	8	8	14	134
— 450	11	6	2	3	5	3	2	—	8	7	3	2	8	60
— 500	6	2	3	4	7	3	—	3	3	1	6	6	3	47
— 550	3	—	2	—	3	1	—	—	—	4	3	9	8	33
— 600	3	—	2	1	4	2	—	—	—	2	3	1	7	25
— 650	3	5	1	—	1	—	—	—	1	1	—	3	2	17
— 700	3	2	—	—	4	—	—	—	1	2	3	1	2	18
— 750	—	3	—	—	—	1	—	—	3	3	—	1	2	13
— 800	—	—	—	—	1	1	—	—	—	—	1	—	1	4
— 850	2	2	—	—	—	—	—	—	—	—	2	1	1	8
—1000	—	—	—	—	1	—	—	—	—	—	1	1	1	4
1001 & above	1	2	—	3	—	1	—	2	2	1	3	4	2	21
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120
	item : dal													
00	9	37	28	54	52	35	63	67	48	30	17	18	15	473
1— 10	30	23	31	35	32	26	32	29	31	33	33	24	28	386
— 20	44	52	48	37	39	42	36	45	47	56	54	63	49	612
— 30	35	29	41	34	31	35	25	35	31	25	40	46	48	455
— 40	39	36	35	25	28	31	28	25	39	39	30	29	35	413
— 50	21	13	15	19	16	22	18	11	11	17	23	11	19	216
— 60	14	16	9	—	10	16	9	10	12	13	13	18	15	149
— 70	10	9	10	8	8	7	5	1	3	7	2	6	4	80
— 80	10	14	11	17	6	13	6	9	6	4	8	12	8	124
— 90	5	2	3	—	3	1	5	1	1	2	3	8	7	41
—100	8	4	3	5	9	3	7	—	3	4	2	4	5	57
—120	5	4	2	4	1	6	2	3	2	5	8	2	2	46
—140	6	1	2	—	4	—	—	—	—	1	1	3	1	19
—160	3	2	—	1	1	1	2	—	4	1	3	1	2	21
—180	—	—	—	—	—	1	—	1	—	2	1	—	—	5
—200	—	2	2	—	—	1	—	1	—	—	1	—	1	8
201 & above	1	2	—	1	—	1	2	2	2	1	1	1	1	15
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120

TABLE. A.2 (contd.). DISTRIBUTION OF HOUSEHOLD (BUILT UP FROM DAILY PURCHASE DATA) WEEKS BY LEVEL OF WEEKLY PURCHASE IN CHHATACKS PER HOUSEHOLD FOR DIFFERENT FOOD ITEMS IN THIRTEEN 4-WEEK MONTHS, GIRIDIH, JUNE 1953—MAY 1954

purchase in chhatacks per household	4-week months													
	-28 June	-26 July	-23 Aug.	-20 Sept.	-18 Oct.	-15 Nov.	-13 Dec.	-10 Jan.	-7 Feb.	-7 Mar.	-4 April	-2 May	-30 May	all month
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)

item : meat

00	173	191	199	191	197	219	192	206	181	207	184	196	193	2531
1— 10	31	18	16	21	12	7	16	13	10	10	21	16	17	208
— 20	27	21	17	16	12	9	22	12	33	16	17	13	23	238
— 30	5	4	4	5	3	2	3	3	8	3	7	3	2	52
— 40	2	4	2	4	8	3	6	3	5	2	7	7	5	58
— 50	1	—	1	2	3	—	—	—	—	1	—	1	—	9
— 60	—	1	—	—	3	—	—	—	1	—	2	2	—	9
— 70	1	1	—	1	—	—	—	—	1	—	1	2	—	7
— 80	—	—	—	—	—	—	—	1	1	1	—	—	—	3
— 90	—	—	1	—	—	—	—	—	—	—	1	—	—	2
—100	—	—	—	—	1	—	1	—	—	—	—	—	—	2
101 & above	—	—	—	—	1	—	—	—	—	—	—	—	—	1
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120

item : edible oil

00	24	35	34	27	37	31	19	25	25	18	18	28	28	349
1— 5	82	88	86	91	68	83	91	90	97	100	84	90	88	1138
—10	70	59	73	66	59	67	61	63	62	69	60	64	71	844
—15	24	13	18	13	17	16	26	26	14	20	26	20	21	251
—20	20	30	23	23	37	28	26	16	22	18	22	23	13	301
—25	10	3	6	7	10	6	7	11	6	7	18	7	6	103
—30	2	5	1	5	5	5	5	5	4	5	6	3	4	55
—35	4	3	—	3	5	1	2	2	5	2	3	2	6	38
—40	1	3	1	5	1	1	—	1	2	1	—	2	—	18
—45	—	—	—	—	—	3	—	—	1	—	1	—	1	6
—50	—	—	1	—	—	—	1	—	—	—	—	1	—	3
—60	1	—	—	—	1	—	—	—	1	—	2	—	1	6
—70	1	—	—	—	—	—	2	1	—	—	—	—	1	5
—80	1	1	—	—	—	—	—	—	—	—	—	—	—	2
—90	—	—	—	—	—	—	—	—	1	—	—	—	—	1
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120

TABLE A.2 (contd.). DISTRIBUTION OF HOUSEHOLD (BUILT UP FROM DAILY PURCHASE DATA) WEEKS BY LEVEL OF WEEKLY PURCHASE IN CHHATACKS PER HOUSEHOLD FOR DIFFERENT FOOD ITEMS IN THIRTEEN 4-WEEK MONTHS, GIRIDIH, JUNE 1953-MAY 1954

purchase in chhatacks per household	4-week months													
	−28 June	−26 July	−23 Aug.	−20 Sept.	−18 Oct.	−15 Nov.	−13 Dec.	−10 Jan.	−7 Feb.	−7 Mar.	−4 April	−2 May	−30 May	all month
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
item : milk														
00	210	196	198	196	194	190	202	203	212	210	189	198	184	2382
1—10	11	19	18	15	16	16	14	21	15	10	18	15	19	207
—20	8	12	10	13	13	15	11	6	1	7	14	5	6	121
—30	2	5	7	7	8	6	5	8	9	8	13	19	19	116
—40	1	4	6	4	2	4	3	1	2	2	4	1	6	40
—50	3	2	—	2	1	4	—	—	—	2	—	1	4	19
—60	5	1	1	—	5	2	4	1	—	—	1	—	1	21
—70	—	1	—	2	—	—	—	—	1	—	—	1	—	5
—80	—	—	—	—	1	1	—	—	—	1	—	—	—	3
—90	—	—	—	—	—	1	—	—	—	—	—	—	—	1
—100	—	—	—	1	—	—	—	—	—	—	—	—	—	1
101 & above	—	—	—	—	—	1	1	—	—	—	1	—	1	4
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120
item : potato														
00	104	151	143	204	192	170	115	34	39	49	36	59	90	1395
1— 10	49	43	40	18	24	30	39	20	10	6	21	35	59	394
— 20	34	17	28	8	10	15	36	39	35	38	45	48	32	385
— 30	13	13	14	6	5	3	15	24	23	25	22	24	14	201
— 40	20	5	11	1	3	6	21	54	48	48	42	32	19	310
— 50	10	3	2	—	4	3	3	18	23	27	14	8	9	124
— 60	3	2	—	—	1	1	3	10	12	13	11	3	2	61
— 70	—	—	1	—	—	1	1	12	13	7	15	9	2	61
— 80	4	3	1	2	1	2	3	9	8	5	14	8	4	64
— 90	—	1	—	—	—	—	1	1	2	2	—	2	1	10
—100	—	—	—	—	—	—	1	3	5	1	2	2	2	16
—120	2	—	—	1	—	—	—	5	6	4	5	4	1	28
—140	—	—	—	—	—	—	1	1	2	1	—	1	2	8
—160	1	2	—	—	—	—	—	5	4	1	4	1	1	19
—180	—	—	—	—	—	—	—	2	—	5	1	1	1	10
—200	—	—	—	—	—	—	—	2	2	3	2	2	—	11
201 & above	—	—	—	—	—	—	1	1	8	5	8	1	1	23
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120

TABLE A.2 (contd.). DISTRIBUTION OF HOUSEHOLD (BUILT UP FROM DAILY PURCHASE) WEEKS BY LEVEL OF WEEKLY PURCHASE IN CHHATACKS PER HOUSEHOLD FOR DIFFERENT FOOD ITEMS IN THIRTEEN 4-WEEK MONTHS, GIRIDIH, JUNE 1953–MAY 1954

purchase in chhatack per household	4-week months													
	−28 June	−26 July	−23 Aug.	−20 Sept.	−18 Oct.	−15 Nov.	−13 Dec.	−10 Jan.	−7 Feb.	−7 Mar.	−4 April	−2 May	−30 May	all month
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
item : kumra														
00	211	230	233	235	215	101	190	224	234	237	233	234	226	2872
1— 5	2	--	2	—	1	—	—	—	--	--	—	—	—	6
—10	10	6	3	2	9	21	10	2	—	—	—	1	3	67
—15	3	—	1	1	—	—	2	—	—	1	—	1	1	10
—20	5	2	1	1	9	27	9	8	5	1	4	1	1	74
—25	5	1	—	1	1	8	6	2	—	—	2	1	4	31
—30	2	—	—	—	—	—	—	1	—	—	—	—	—	3
—35	1	1	—	—	1	7	6	2	—	1	1	—	2	22
—40	—	—	—	—	1	2	1	—	—	—	—	1	2	7
—50	1	—	—	—	1	6	—	1	—	—	—	1	1	11
—60	—	—	—	—	—	2	3	—	—	—	—	—	—	5
—70	—	—	—	—	1	1	1	—	1	—	—	—	—	4
—80	—	—	—	—	—	3	1	—	—	—	—	—	—	4
—90	—	—	—	—	1	—	1	—	—	—	—	—	—	2
91 & above	—	—	—	—	—	1	1	—	—	—	—	—	—	2
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120
item : kachu														
00	225	162	124	151	131	146	204	237	239	240	240	240	240	2579
1— 5	2	12	15	4	1	4	1	—	—	—	—	—	—	39
— 10	7	21	33	27	36	20	21	1	1	—	—	—	—	176
— 15	—	8	9	5	3	3	2	—	—	—	—	—	—	30
— 20	5	19	24	28	31	28	6	2	—	—	—	—	—	143
— 25	—	7	7	8	17	7	2	—	—	—	—	—	—	48
— 30	—	2	2	2	3	—	—	—	—	—	—	—	—	9
— 35	1	4	10	5	4	6	2	—	—	—	—	—	—	32
— 40	—	2	5	3	3	3	—	—	—	—	—	—	—	16
— 45	—	—	—	—	—	—	—	—	—	—	—	—	—	—
— 50	—	1	1	3	3	3	1	—	—	—	—	—	—	12
— 60	—	—	2	1	1	4	—	—	—	—	—	—	—	8
— 70	—	—	1	—	2	4	—	—	—	—	—	—	—	7
— 80	—	2	3	2	3	1	—	—	—	—	—	—	—	11
—100	—	—	1	—	1	1	—	—	—	—	—	—	—	3
101 & above	—	—	3	1	1	1	1	—	—	—	—	—	—	7
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120

TABLE A.2 (contd.). DISTRIBUTION OF HOUSEHOLD (BUILT UP FROM DAILY PURCHASE DATA) WEEKS BY LEVEL OF WEEKLY PURCHASE IN CHHATACKS PER HOUSEHOLD FOR DIFFERENT FOOD ITEMS IN THIRTEEN 4-WEEK MONTHS, GIRIDIH, JUNE 1963-MAY 1964

purchase in chhataoks per household	4-week months													
	-28 June	-26 July	-23 Aug.	-20 Sept.	-18 Oct.	-16 Nov.	-13 Dec.	-10 Jan.	-7 Feb.	-7 Mar.	-4 April	-2 May	-30 May	all month
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
item : brinjal														
00	230	238	239	229	234	222	154	98	100	124	169	213	223	2493
1— 5	6	1	1	1	—	1	5	1	3	—	4	2	3	29
— 10	3	—	—	—	3	9	17	14	10	11	13	11	8	99
— 15	1	1	—	—	—	3	2	4	—	6	3	—	1	21
— 20	—	—	—	—	3	2	28	32	39	30	23	3	1	161
— 25	—	—	—	—	—	2	13	11	14	6	5	5	—	56
— 30	—	—	—	—	—	1	3	30	26	23	12	3	—	98
— 35	—	—	—	—	—	—	—	—	—	—	—	—	—	—
— 40	—	—	—	—	—	—	2	9	11	4	3	2	1	32
— 45	—	—	—	—	—	—	1	1	1	2	—	—	—	5
— 50	—	—	—	—	—	—	4	12	13	7	1	—	1	38
— 60	—	—	—	—	—	—	3	8	5	3	2	—	—	21
— 70	—	—	—	—	—	—	2	4	5	4	1	—	2	18
— 80	—	—	—	—	—	—	1	8	4	3	2	1	—	19
— 90	—	—	—	—	—	—	—	3	—	—	—	—	—	3
—100	—	—	—	—	—	—	2	2	2	1	1	—	—	8
101 & above	—	—	—	—	—	—	2	3	7	6	1	—	—	19
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120
item : vindi														
00	221	229	223	197	172	210	240	240	240	240	240	237	211	2900
1—02	1	—	2	1	1	1	—	—	—	—	—	—	—	6
—04	8	1	8	4	11	10	—	—	—	—	—	2	14	58
—06	1	2	1	1	1	3	—	—	—	—	—	—	3	12
—08	4	3	5	16	20	5	—	—	—	—	—	1	9	62
—10	2	1	1	2	—	—	—	—	—	—	—	—	1	7
—12	1	1	—	2	3	2	—	—	—	—	—	—	—	9
—14	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—16	1	—	—	4	12	5	—	—	—	—	—	—	1	23
—20	—	2	—	2	1	2	—	—	—	—	—	—	—	7
—24	—	1	—	2	2	1	—	—	—	—	—	—	—	7
—28	—	—	—	—	2	—	—	—	—	—	—	—	1	3
—32	—	—	—	3	5	—	—	—	—	—	—	—	—	8
—40	—	—	—	3	3	1	—	—	—	—	—	—	—	7
—48	1	—	—	1	3	—	—	—	—	—	—	—	—	5
49 & above	—	—	—	2	4	—	—	—	—	—	—	—	—	6
all levels	240	240	240	240	240	240	240	240	240	240	204	240	240	3120

TABLE A.2 (contd.). DISTRIBUTION OF HOUSEHOLD (BUILT UP FROM DAILY PURCHASE DATA) WEEKS BY LEVEL OF WEEKLY PURCHASE IN CHHATACKS PER HOUSEHOLD FOR DIFFERENT FOOD ITEMS IN THIRTEEN 4-WEEK MONTH, GIRIDIH JUNE 1953–MAY 1954

purchase in chhatacks per household	4-week months													
	-28 June	-26 July	-23 Aug.	-20 Sept.	-18 Oct.	-15 Nov.	-13 Dec.	-10 Jan.	-7 Feb.	-7 Mar.	-4 April	-2 May	-30 May	all month
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
item: onion														
00	112	116	108	147	168	192	191	160	181	191	158	154	153	2057
1— 2	21	8	12	7	5	6	8	6	3	1	5	3	1	80
— 4	20	19	21	25	21	12	13	14	14	8	11	10	12	200
— 6	15	7	5	—	3	—	—	3	3	1	1	1	1	40
— 8	21	22	36	17	17	12	12	14	23	23	34	30	22	283
—10	4	4	2	1	1	—	—	3	3	—	1	2	2	23
—12	8	8	5	7	6	9	7	2	3	6	5	3	6	75
—14	2	—	2	4	2	1	1	2	1	2	4	3	2	26
—16	24	26	19	18	10	4	7	8	8	6	15	19	31	195
—20	6	11	7	4	1	—	—	1	—	1	—	2	3	36
—24	2	4	9	3	—	3	—	—	—	1	—	5	—	27
—28	—	2	5	1	1	—	—	1	—	—	1	1	—	12
—32	1	4	4	3	3	1	1	—	1	—	2	1	2	23
—40	2	2	2	1	1	—	—	—	—	—	1	2	2	13
—48	2	3	1	—	—	—	—	—	—	—	2	3	3	14
—64	—	1	1	—	—	—	—	—	—	—	—	1	—	3
—80	—	—	1	1	1	—	—	—	—	—	—	—	—	3
—96	—	1	—	1	—	—	—	—	—	—	—	—	—	2
97 & above	—	2	—	—	—	—	—	—	—	—	—	—	—	2
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120
item : cauliflower														
00	240	240	240	240	240	239	203	135	178	213	240	240	240	2888
1— 5	—	—	—	—	—	—	5	12	6	2	—	—	—	25
— 10	—	—	—	—	—	—	13	22	15	6	—	—	—	56
— 15	—	—	—	—	—	—	4	9	7	1	—	—	—	21
— 20	—	—	—	—	—	1	6	33	12	8	—	—	—	59
— 25	—	—	—	—	—	—	2	8	7	2	—	—	—	19
— 30	—	—	—	—	—	—	—	1	1	—	—	—	—	2
— 35	—	—	—	—	—	—	2	5	5	7	—	—	—	19
— 40	—	—	—	—	—	—	—	6	2	—	—	—	—	8
— 45	—	—	—	—	—	2	—	—	—	—	—	—	—	2
— 50	—	—	—	—	—	—	—	2	5	—	—	—	—	7
— 60	—	—	—	—	—	—	2	3	1	—	—	—	—	6
— 70	—	—	—	—	—	—	—	1	1	1	—	—	—	3
— 80	—	—	—	—	—	—	—	1	—	—	—	—	—	1
— 90	—	—	—	—	—	—	—	1	—	—	—	—	—	1
—100	—	—	—	—	—	—	—	1	—	—	—	—	—	1
101 & above	—	—	—	—	—	—	1	1	—	—	—	—	—	2
all levels	240	240	240	240	240	240	210	240	240	240	240	240	240	3120

14

TABLE A.2 (contd.). DISTRIBUTION OF HOUSEHOLD (BUILT UP FROM DAILY PURCHASE DATA) WEEKS BY LEVEL OF WEEKLY PURCHASE IN CHHAKTACS PER HOUSEHOLD FOR DIFFERENT FOOD ITEMS IN THIRTEEN 4-WEEK MONTHS. GIRIDIH, JUNE 1953-MAY 1954

purchase in chhatocks per household	4-week months													
	-28 June	-25 July	-23 Aug.	-20 Sept.	-18 Oct.	-15 Nov.	-13 Dec.	-10 Jan.	-7 Feb.	-7 Mar.	-4 April	-2 May	-30 May	all month
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
item : sugar														
00	147	169	169	156	161	161	163	181	179	185	160	163	150	2144
1—02	25	24	21	16	11	18	18	12	11	8	22	18	27	231
—04	16	11	8	18	12	10	9	5	9	7	14	8	13	140
—06	6	4	4	9	6	11	7	4	5	6	7	5	8	81
—08	13	9	17	9	12	10	11	10	7	8	9	14	8	137
—10	6	3	3	4	6	6	6	—	—	4	2		2	44
—12	3	—	4	4	2	2	2	3	4	6	4	2	5	41
—14	—	1	—	3	8	2	5	—	—		1	2	1	23
—16	10	7	6	6	6	5	4	4	6	3	4	9	9	70
—20	3	2	5	2	5	4	5	7	1	1	1	8	3	45
—24	2	1	—	4	2	1	2	2	1	1	4	2	4	26
—28	1	4	—	1	2	2	—	5	8	2	6	5	3	39
—32	3	1	1	3	2	5	5	1	4	4	2	2	3	36
—40	2	2	—	3	1	2	2	5	3	—	1	—	—	21
—48	—	—	2	—	1	—	1	—	1	3	2	—	1	11
—64	1	—	—	—	2	—	—	1	1	2	—	1	1	9
—80	2	1	—	2	—	1	—	—	—	—	—	—	1	7
—96	—	—	—	—	—	—	—	—	—	—	—	—	—	1
97 & above	—	—	1	—	1	—	1	—	—	—	1	1	—	5
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120
item : gur														
00	129	159	158	163	165	159	164	147	137	156	161	170	186	2054
1— 2	8	10	5	2	3	4	4	11	9	10	10	15	10	102
— 4	17	10	15	13	14	10	16	22	22	18	13	20	16	206
— 6	3	2	7	2	2	2	7	4	4	1	2	3	2	41
— 8	22	19	17	18	12	13	16	11	16	17	14	5	8	189
—10	10	1	3	2	—	2	1	7	5	2	5	1	—	39
—12	9	7	1	2	7	4	5	9	3	4	5	4	3	63
—14	4	—	1	1	3	—	1	1	6	5	2	2	—	26
—16	14	10	10	11	9	10	8	12	15	9	12	9	6	136
—20	1	1	3	3	2	1	1	1	7	5	2	1	3	31
— 24	6	6	7	7	8	5	3	3	3	4	1	—	2	53
— 28	—	—	—	1	5	1	1	4	1	—	1	2	1	16
— 32	3	4	5	4	3	2	3	4	3	4	2	2	—	39
— 40	2	1	3	—	3	2	1	—	4	1	4	3	—	24
— 48	1	5	—	5	1	5	—	2	1	4	—	1	2	23
— 64	1	—	—	3	1	5	4	1	2	—	2	—	2	20
— 80	3	3	2	3	—	2	3	—	1	—	1	—	—	17
— 96	1	—	—	—	1	4	—	—	—	—	—	—	—	6
—112	—	—	—	—	—	2	—	—	—	1	—	1	—	3
—128	—	1	—	—	1	1	1	—	—	—	1	1	—	5
—144	—	—	—	—	—	—	1	—	—	—	—	—	—	2
—160	1	1	3	—	—	2	1	—	—	—	—	—	—	8
161 & above	6	4	—	1	—	8	—	1	1	—	1	1	—	18
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120

TABLE A.2 (contd.) DISTRIBUTION OF HOUSEHOLD (BUILT UP FROM DAILY PURCHASE DATA) WEEKS BY LEVEL OF WEEKLY PURCHASE IN CHHATACKS PER HOUSEHOLD FOR DIFFERENT FOOD ITEMS IN THIRTEEN 4-WEEK MONTHS, GIRIDIH, JUNE 1953–MAY 1954

purchase in chhatacks per household	4-week months													
	-28 June	-26 July	-23 Aug.	-20 Sept.	-16 Oct.	-15 Nov.	-13 Dec.	-10 Jan.	-7 Feb.	-7 Mar.	-4 April	-2 May	-30 May	all month
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)

item : salt

00	78	98	94	95	89	71	70	79	68	66	65	78	84	1035
1— 5	12	8	4	7	6	13	5	8	9	10	16	13	11	122
— 10	33	36	39	30	32	27	44	40	54	53	46	43	38	515
— 15	21	11	10	11	9	15	14	15	12	19	19	18	18	192
— 20	55	52	66	63	77	68	62	65	61	74	65	82	56	826
— 25	12	5	4	7	7	11	5	3	5	1	4	9	11	84
— 30	2	1	1	—	2	1	2	—	—	—	2	1	2	14
— 35	12	7	6	13	5	11	13	9	10	8	5	5	7	111
— 40	2	7	4	10	5	12	8	15	7	5	10	6	6	97
— 50	2	1	1	—	—	1	3	1	1	2	1	—	1	14
— 60	—	1	1	—	1	—	1	—	1	—	—	—	1	6
— 70	—	3	1	3	—	1	—	—	1	1	1	—	—	11
— 80	7	8	6	1	4	7	11	4	5	1	5	1	2	62
— 90	—	—	—	—	—	—	—	—	1	—	—	—	—	1
—100	—	—	2	—	—	—	—	1	—	—	1	1	—	5
101 & above	4	2	1	—	3	2	2	—	5	—	—	3	3	25
all levels	240	240	240	240	240	240	240	240	240	240	240	240	240	3120

TABLE A.3. ANALYSIS OF TOTAL VARIANCE INTO ITS STAGE COMPONENTS WITH
HOUSEHOLDS SELECTED IN THE FIRST STAGE WITH VARYING SIZE OF
TIME-UNITS (ACCOUNTING) IN THE SECOND STAGE

time-units (accounting period in the second stage with households)	scale per capita per day				scale per household per day			
	mean in chhataoks	variance			mean in chhataoks	variance		
		between household	residual	total		between household	residual	total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. cereals								
day	10.03	1055.54	2.68	7.17	69.70	663990.1	249.60	2082.6
week	10.00	232.73	1.27	5.65	69.70	94855.7	156.80	1948.2
2—week	9.99	116.35	1.06	5.42	69.70	47427.9	125.60	1915.7
4—week	9.00	58.03	0.61	4.96	69.70	23713.9	101.50	1889.8
13—week	9.97	17.81	0.41	4.70	69.70	7297.6	66.60	1851.4
26—week	9.97	8.83	0.37	4.57	69.70	3648.3	56.10	1837.1
52—week	9.95	×	×	4.50	69.70	×	×	1824.2
2. dal								
day	0.78	25.87	0.13	0.20	5.41	5152.7	8.70	22.6
week	0.78	3.62	0.05	0.12	5.41	736.3	2.90	16.8
2—week	0.77	1.81	0.04	0.11	5.41	368.2	2.30	16.1
4—week	0.79	0.90	0.03	0.09	5.41	184.1	1.70	15.5
13—week	0.77	0.28	0.02	0.08	5.41	56.6	1.20	14.9
26—week	0.77	0.14	0.01	0.07	5.41	28.3	1.10	14.6
52—week	0.77	×	×	0.07	5.41	×	×	14.2
3. meal								
day	0.11	2.500	0.334	0.330	0.78	247.2	24.30	24.9
week	0.11	0.388	0.063	0.069	0.78	35.3	4.04	4.6
2—week	0.11	0.198	0.032	0.038	0.78	17.7	2.18	2.8
4—week	0.11	0.100	0.015	0.022	0.78	8.8	0.96	1.6
13—week	0.11	0.030	0.003	0.009	0.78	2.7	0.12	0.8
26—week	0.11	0.014	0.001	0.008	0.78	1.4	0.23	0.7
52—week	0.11	×	×	0.007	0.78	×	×	0.7
4. edible oil								
day	0.18	1.680	0.014	0.019	1.24	357.2	0.96	1.9
week	0.18	0.242	0.004	0.009	1.24	51.0	0.20	1.2
2—week	0.17	0.120	0.002	0.007	1.24	25.5	0.14	1.1
4—week	0.17	0.060	0.002	0.006	1.24	12.8	0.09	1.1
13—week	0.17	0.018	0.001	0.005	1.24	3.9	0.06	1.0
26—week	0.17	0.008	0.001	0.005	1.24	2.0	0.04	1.0
52—week	0.17	×	×	0.005	1.24	×	×	1.0
5. milk								
day	0.54	223.75	1.35	1.95	4.44	10560.5	44.30	97.0
week	0.54	25.80	0.41	0.80	4.44	2802.1	31.20	83.5
2—week	0.53	12.77	0.37	0.84	4.44	1401.0	28.70	80.6
4—week	0.53	6.32	0.35	0.80	4.44	700.5	26.70	77.8
13—week	0.53	1.89	0.30	0.69	4.44	215.5	27.50	73.9
26—week	0.53	0.95	0.22	0.58	4.44	107.8	23.90	65.5
52—week	0.53	×	×	0.48	4.44	×	×	53.9
6. potato								
day	0.47	24.210	0.450	0.511	3.20	2679.20	27.40	34.5
week	0.47	3.430	0.290	0.350	3.20	382.80	18.30	25.2
2—week	0.47	1.710	0.270	0.326	3.20	191.40	17.60	24.2
4—week	0.47	0.840	0.260	0.300	3.20	95.70	17.30	23.3
13—week	0.47	0.260	0.220	0.230	3.20	29.40	15.30	18.8
26—week	0.47	—	—	0.220	3.20	—	—	17.9
52—week	0.46	×	×	0.070	3.20	×	×	7.4

TABLE A.3 (contd.). ANALYSIS OF TOTAL VARIANCE INTO ITS STAGE COMPONENTS WITH HOUSEHOLDS SELECTED IN THE FIRST STAGE WITH VARYING SIZE OF TIME-UNITS (ACCOUNTING) IN THE SECOND STAGE

time-units (accounting period in the second stage with households)	scale per capita per day				scale per household per day			
	mean in chhatacks	variance			mean in chhatacks	variance		
		between household	residual	total		between household	residual	total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7. kumra								
day	0.12	3.060	0.372	0.379	0.85	246.11	20.54	21.15
week	0.12	0.502	0.107	0.116	0.85	35.10	6.40	6.95
2—week	0.12	0.257	0.060	0.087	0.85	17.55	4.90	5.38
4—week	0.12	0.129	0.062	0.068	0.85	8.77	4.02	4.38
13—week	0.12	0.039	0.034	0.035	0.85	2.70	2.24	2.35
26—week	0.12	—	—	0.018	0.85	1.35	0.89	1.12
52—week	0.11	×	×	0.010	0.85	×	×	0.67
8. kachu								
day	0.11	1.780	0.170	0.174	0.80	237.68	12.00	12.61
week	0.11	0.256	0.065	0.069	0.80	33.95	5.09	5.64
2—week	0.11	0.128	0.051	0.054	0.80	16.97	4.21	4.60
4—week	0.11	0.064	0.042	0.044	0.80	8.49	3.70	4.06
13—week	0.11	—	—	0.027	0.80	2.61	2.41	2.46
26—week	0.11	—	—	0.017	0.80	—	—	1.63
52—week	0.11	×	×	0.005	0.80	×	×	0.65
9. brinjal								
day	0.24	6.700	0.366	0.383	1.74	980.70	22.10	24.60
week	0.24	0.941	0.205	0.219	1.75	141.10	13.10	15.50
2—week	0.24	0.471	0.187	0.198	1.75	70.50	12.10	14.30
4—week	0.24	0.231	0.175	0.179	1.75	35.30	11.50	13.40
13—week	0.24	—	—	0.132	1.75	—	—	11.30
26—week	0.24	—	—	0.086	1.75	—	—	7.70
52—week	0.23	×	×	0.016	1.75	×	×	2.70
10. vindi								
day	0.07	1.250	0.096	0.099	0.52	78.29	5.00	5.20
week	0.07	0.175	0.044	0.046	0.52	10.34	2.54	2.68
2—week	0.07	0.080	0.037	0.039	0.52	5.17	2.26	2.37
4—week	0.07	0.043	0.034	0.034	0.52	2.58	1.94	1.99
13—week	0.07	—	—	0.019	0.52	—	—	1.26
26—week	0.07	—	—	0.010	0.52	—	—	0.60
52—week	0.07	×	×	0.003	0.52	×	×	0.20
11. onion								
day	0.11	4.200	0.042	0.053	0.68	172.02	2.11	2.57
week	0.11	0.589	0.016	0.027	0.67	24.59	0.87	1.32
2—week	0.11	0.291	0.012	0.023	0.67	12.29	0.76	1.10
4—week	0.11	0.145	0.010	0.020	0.67	6.15	0.67	1.09
13—week	0.11	0.044	0.008	0.016	0.67	1.89	0.55	0.63
26—week	0.11	0.022	0.002	0.012	0.67	0.93	0.15	0.55
52—week	0.11	×	×	0.011	0.67	×	×	0.47

TABLE A.3 (contd.). ANALYSIS OF TOTAL VARIANCE INTO ITS STAGE COMPONENTS WITH HOUSEHOLDS SELECTED IN THE FIRST STAGE WITH VARYING SIZE OF TIME-UNITS (ACCOUNTING) IN THE SECOND STAGE

time-units (accounting period in the second stage with households)	scale per capita per day				scale per household per day			
	mean in chhatacks	variance			mean in chhatacks	variance		
		between household	residual	total		between household	residual	total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
12. cauliflower								
day	0.04	0.440	0.056	0.058	0.32	56.51	3.40	3.54
week	0.04	0.061	0.024	0.025	0.32	8.07	1.74	1.85
2—week	0.04	0.030	0.019	0.019	0.32	4.04	1.52	1.62
4—week	0.04	—	—	0.016	0.32	2.02	1.33	1.38
13—week	0.04	—	—	0.008	0.32	—	—	0.76
26—week	0.04	—	—	0.004	0.32	—	—	0.34
52—week	0.04	×	×	0.001	0.32	×	×	0.16
13. sugar								
day	0.08	9.740	0.031	0.058	0.50	301.30	1.00	1.81
week	0.08	1.356	0.006	0.031	0.50	43.10	0.33	1.13
2—week	0.08	0.675	0.004	0.030	0.50	21.50	0.26	1.07
4—week	0.08	0.333	0.003	0.028	0.50	10.80	0.22	1.02
13—week	0.07	0.102	0.002	0.027	0.50	3.30	0.20	0.97
26—week	0.07	0.051	0.001	0.026	0.50	1.70	0.12	0.88
52—week	0.07	×	×	0.024	0.50	×	×	0.83
14. gur								
day	0.13	8.400	0.118	0.141	1.12	1793.90	8.20	13.00
week	0.13	1.163	0.036	0.058	1.12	256.20	2.90	7.70
2—week	0.13	0.576	0.028	0.049	1.12	128.10	2.40	7.20
4—week	0.13	0.291	0.022	0.043	1.12	64.10	2.00	6.70
13—week	0.13	0.089	0.015	0.033	1.12	19.70	1.50	6.10
26—week	0.13	0.043	0.010	0.027	1.12	9.90	1.20	5.50
52—week	0.13	×	×	0.021	1.12	×	×	4.90
15. salt								
day	0.29	2.170	0.006	0.011	1.87	304.60	0.27	1.09
week	0.29	0.297	0.007	0.008	1.88	45.40	0.20	1.05
2—week	0.29	0.146	0.004	0.008	1.88	22.70	0.15	1.01
4—week	0.29	0.072	0.003	0.007	1.88	11.30	0.12	0.97
13—week	0.29	0.022	0.002	0.006	1.88	3.50	0.10	0.93
26—week	0.28	0.010	0.002	0.006	1.87	1.80	0.07	0.90
52—week	0.28	×	×	0.005	1.87	×	×	0.87

TABLE A.4. ANALYSIS OF TOTAL VARIANCE AT DIFFERENT STAGES IN SAMPLING WITH TIME-UNITS (CALENDAR) SELECTED IN THE FIRST STAGE WITH HOUSE-HOLD-DAY AND HOUSE-WEEK UNITS IN THE SECOND STAGE

items	mean in chha-tacks	'days' in the first stage with household-day in the second stage				'week' in the first stage with household-week in the second stage			
		variance				variance			
		between day	within day between household	household day	total	between week	within week between household	household week	total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

per capita per day

1. meat	0.11	4.202	0.274	0.268	0.330	1.116	0.052	0.045	0.069
2. edible oil	0.18	0.091	0.018	0.013	0.019	0.028	0.008	0.004	0.009
3. milk	0.54	3.450	1.926	1.315	1.051	3.040	0.851	0.362	0.887
4. potato	0.47	10.770	0.337	0.271	0.511	10.510	0.176	0.113	0.345
5. kumra	0.12	1.470	0.360	0.353	0.379	1.270	0.095	0.088	0.115
6. kachu	0.11	1.250	0.144	0.151	0.174	1.050	0.052	0.048	0.069
7. brinjal	0.24	5.800	0.273	0.255	0.383	5.660	0.112	0.096	0.219
8. vindi	0.07	1.140	0.081	0.078	0.099	1.010	0.030	0.027	0.046
9. onion	0.11	0.208	0.051	0.039	0.053	0.172	0.024	0.013	0.027
10. cauliflower	0.04	0.500	0.050	0.049	0.058	0.436	0.018	0.017	0.025
11. gur	0.13	0.630	0.132	0.110	0.141	0.336	0.053	0.031	0.058

per household per day

1. meat	0.78	275.24	20.67	20.05	24.91	62.40	3.67	3.05	4.63
2. edible oil	1.24	25.33	1.52	0.54	1.92	1.47	1.18	0.18	1.16
3. milk	4.44	216.08	95.00	41.38	97.01	168.80	81.90	28.67	83.50
4. potato	3.20	488.40	20.87	19.56	34.54	480.50	17.80	10.49	25.20
5. kumra	0.85	91.76	19.95	19.33	21.15	70.70	3.89	5.31	6.95
6. kachu	0.80	79.69	11.48	10.86	12.61	64.90	4.65	4.08	5.64
7. brinjal	1.74	331.32	19.46	16.82	24.65	324.80	10.35	7.79	15.50
8. vindi	0.52	63.28	4.22	4.01	5.20	59.30	1.74	1.67	2.68
9. onion	0.68	10.44	24.30	1.96	2.57	9.12	1.19	0.73	1.32
10. cauliflower	0.32	31.35	3.07	2.92	3.54	27.30	1.43	1.30	1.86
11. gur	1.12	40.85	12.55	7.64	13.02	22.40	7.45	2.57	7.70

TABLE A.5. TWO-WAY FREQUENCY DISTRIBUTION OF HOUSEHOLD MONTHS BY LEVEL OF MONTHLY CONSUMPTION OF GRAIN (IN CHHATACKS) AND TOTAL NUMBER OF MONTHLY BOARDER DAYS

boarder days \ grains	00.0—249.9	—499.9	—749.9	—999.9	—1249.9	—1499.9	—1749.9	—1999.9	—2249.9	—2499.9	—2749.9	—2999.9	—3249.9	—3499.9	—3749.0	—3999.2	—4249.9	4250.0 and above	total
0 — 28	1																		1
— 56	8	2	12																23
— 84	4	22	26	7															61
— 112		8	31	45	7	2		1											94
— 140		1	13	28	52	17	4	2											117
— 168			2	6	28	17	13	11	6	3	4								90
— 196				3	12	17	22	19	13		4	1							91
— 224					3	10	23	13	8	6	3	2			1				69
— 252					1		3	9	9	9	4	7	1	1					44
— 280								1	2	6	5	6	8	4	1	1	2		36
— 306									1		3	2	11	7	7	1	1	2	35
— 336											2	4	4	5	3			10	28
— 364										1	6	1	1	7	1	1		10	28
— 392											2		1	2	1	3		14	23
— 420												1	3		1	4	6	9	24
— 448																		8	8
— 476															1			2	3
— 504																		2	2
— 532															1			2	3
533 & above																		1	1
	13	33	86	90	102	66	73	57	45	19	37	31	18	26	11	13		60	760

TABLE A.6. TWO-WAY FREQUENCY-DISTRIBUTION OF HOUSEHOLD MONTHS BY
LEVEL OF MONTHLY CONSUMPTION OF SALT (IN CHHATACKS) AND MONTHLY
BOARDER DAYS

boarder days \ salt	00.0—7.9	—15.0	—23.9	—31.0	—39.9	—47.9	—55.9	—63.9	—71.9	—79.9	—87.9	—95.9	—103.9	—111.9	—119.9	120.0 an above	total
0 — 28				1													1
— 56			2	3	17												22
— 84	1	22	15	23													61
— 112			3	10	55	9	9	8									94
— 140				2	46	16	23	20	10								117
— 168					17	11	15	20	26	1							90
— 196						9	7	9	28	36	1		1				91
— 224								8	16	34	7	3		1			69
— 252				1	1	2	19	17	1	2	1						44
— 280						1	6	10	2	3	9	2		2	1		36
— 308					1	1	2	8		1	7	3	1	5	5	1	35
— 336							3	2	2	1	1	2	3	4	10		28
— 364							6	6	2	2	2			4	5	1	28
— 392								4	1	2	3			3	7	3	23
— 420							2	4	1		7	2			7	3	24
— 448								1	1		2			1	1	2	8
— 476								1							2		3
— 504												1				1	2
— 532								2								1	3
533 & above																1	1
total	1	29	31	168	45	168	128	161	19	11	35	11	4	20	34	15	780

TABLE A.7. TWO-WAY FREQUENCY DISTRIBUTION OF HOUSEHOLD MONTHS BY LEVEL OF MONTHLY CONSUMPTION OF GRAIN (IN CHHATACKS) AND SALT (IN CHHATACKS)

salt \ grains	00.0-249.9	-499.9	-749.9	-999.9	-1249.9	-1499.9	-1749.9	-1999.9	-2249.9	-2499.9	-2749.9	-2999.9	-3249.9	-3499.9	-3749.9	-3999.9	-4249.0	4250 and above	total
0.0 — 7.9			1																1
— 15.9		2	17	8	2														29
— 23.9		6	9	13	2	1													31
— 31.9		5	6	62	57	29	5	1		3									168
— 39.9				2	8	21	8	5	1										45
— 47.9				1	16	18	16	7	3	3	1	1							66
— 55.9					5	24	15	26	25	14	4	4	6	1	2	1	1		128
— 63.9						9	20	26	27	25	8	22	13	1	4	1	1	2	161
— 71.9								4	1	1	5	1	2	1	2		1	1	19
— 79.9									1	1	1	1	1	2	3		1	1	11
— 87.9									2	1		3	6	3	6	4	3	7	35
— 95.9												1	1	1	2	2		4	11
—103.9																1	1	2	4
—111.9												1	2	2	4	1	1	9	20
—119.9														6	3	1	4	20	34
120.0 & above															1			14	15
total		13	33	86	90	102	66	73	57	45	19	37	31	18	26	11	13	60	780