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MINISTRY OF FOOD

# Domestic Food Consumption and Expenditure, 1950

WITH A SUPPLEMENT ON FOOD EXPENDITURE  
BY URBAN WORKING-CLASS HOUSEHOLDS,  
1940-1949

ANNUAL  
REPORT OF THE  
NATIONAL FOOD SURVEY  
COMMITTEE

LONDON: HER MAJESTY'S STATIONERY OFFICE

1952

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**THE NATIONAL FOOD SURVEY**  
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## PREFACE

As stated in the Preface to the Committee's First Report,<sup>1</sup> the National Food Survey was initiated by the Ministry of Food in 1940. Its purpose was to provide an independent check on the food consumption and expenditure of the population during the war, and thus to assess the effectiveness of the Government's war-time food policy. It was assumed that this would be most clearly reflected in the food consumption and expenditure of urban working-class households, and the Survey was therefore mainly directed towards such households, though special studies were made from time to time of other groups of the population.

Owing to the continuing food supply difficulties in the post-war period, and because the Survey was found to be of special value in relation to derationing and other aspects of post-war food policy, it was continued in its war-time form until the end of 1949. In the meantime it had, however, become increasingly clear that to limit the Survey to urban working-class households made it difficult to assess the full impact of supply and price changes on different groups within the population. Accordingly it was decided that from the beginning of 1950 the Survey should be based on a national sample representing, as far as possible, a complete cross-section of the population.

In the Preface to the First Report it was pointed out in regard to the data for 1940 to 1949, the analysis of which had been unavoidably delayed, that the Committee had decided to recommend the issue of a series of reports, each of which would be concerned with one or more special aspects of the Survey. In regard to the data from 1950 onwards, the Committee have recommended that the results of the Survey should be made available to the public in a series of Annual Reports, of which the present volume is the first.

In order to facilitate comparison with previous years, regard has been paid in the present volume to the method of presentation of the data for 1940 to 1949. Thus the series of annual figures for urban working-class consumption and for the corresponding energy value and nutrient composition of the diets has been brought up to date in the present volume. Since this volume also covers food expenditure, parallel data for the period 1940 to 1949, which were not published in the First Report but which have now been analysed, have been included as a special supplement. Comparative figures have also been given for different seasons of the year. The most notable additions to the present volume are, however, the analyses of food consumption and expenditure by social class and by family composition. It is hoped that such analyses will form a feature of all future Annual Reports.

The preparation of the present report has again been undertaken jointly by Mr. W. L. Kendall, who has been responsible for the general design and for the sections on food consumption data, and Miss D. F. Hollingsworth, who has prepared the sections on energy value and nutrient composition. The Committee desire to express their indebtedness to these two officers of the Ministry for the most competent manner in which they have implemented the Committee's recommendations. The Committee is also especially indebted

<sup>1</sup> *The Urban Working-Class Household Diet 1940 to 1949*. First Report of the National Food Survey Committee. H.M. Stationery Office, 1951. Price 3s. 6d.

to Professor E. F. Nash for his advice in the preparation of the Supplement on Food Expenditure.

Finally the Ministry and the Committee desire once again to express their indebtedness to the many housewives who, with the assistance of the field staff of the London Press Exchange, have provided the information on which the Survey is based.

Since completing the Report the Committee has suffered a tragic loss through Sir Jack Drummond's death. The National Food Survey owed much at its inception to his vision, and to the work of this Committee he generously brought both his highly valued and wide experience as a scientist and his wise counsel as a man.

NORMAN C. WRIGHT,

*Chairman*

September, 1952

National Food Survey Committee



## I. INTRODUCTION

1. This Report presents the information collected by the National Food Survey during 1950. The general trend of food consumption during that year is briefly as follows. Already in 1949 the diet showed increasing variety and palatability compared with the years following the war and this improvement continued into the early months of 1950. During the war and the years immediately following, the consumer had less than the usual supplies of meat, fats, sugar, eggs, and fruit. As compensation, so far as bulk and nutritional value were concerned, the housewife was able to obtain more milk, bread, and potatoes and other vegetables. This situation, as shown in the diets of urban working-class households, is described in the First Report<sup>1</sup> where it is recorded that the signs of a return to the pre-war pattern of consumption began to appear after 1947. Although meat and sugar consumption still lagged well behind that of the years before the war, increasing quantities of fish, eggs and fats, sugar and preserves, bacon and tea, began to be available to the housewife, and milk consumption reached even higher levels. This improvement continued throughout 1949 and into 1950, by which time dairy products, eggs and fats, and fruit became even more plentiful. Even the meat position improved in 1950 with home production increasing by as much as 20 per cent although, with the cessation of meat shipments from the Argentine from July 21st, the average level of supplies over the year showed only a slight increase. Sugar supplies also remained low.

2. The changes in estimated supplies moving into civilian consumption in 1949 and 1950 are shown in the following table.

TABLE 1  
Estimated Supplies of Food moving into Civilian Consumption<sup>2</sup>  
*Percentage changes compared with 1944*

	1949	1950
	%	%
Dairy products (excluding butter) as milk solids	+ 7	+10
Meat (edible weight)	-22	- 1
Fish, poultry and game (edible weight)	+50	+18
Eggs	+22	+37
Oils and fats	+14	+15
Sugar and syrups	+20	+ 7
Potatoes	- 7	-12
Pulses, nuts etc.	+31	+63
Fruit (including tomatoes)	+39	+38
Vegetables (other than potatoes)	-16	-18
Grain products	- 6	-12
Beverages	+ 7	+ 2

3. With this improvement in supplies, a general policy of relaxing controls was possible and a number were removed or eased during the earlier months of 1950. The limitations on the purchase of milk by domestic consumers and by caterers were lifted on 5th January and the requirement that customers

<sup>1</sup> The Urban Working-Class Household Diet 1940-1949, H.M.S.O., 1951.

<sup>2</sup> Cmd. 7842, Food Consumption Levels in the U.K. and Ministry of Food Bulletin No. 632 1952.

should be registered for milk with a particular retailer came to an end in the following May. During that month, points rationing was ended. Eggs were sold without restriction during the flush period which extended that year from mid-March to mid-June and the policy of "liberalising imports" which allowed an increasing number of minor foods to be imported, added further to the variety of the diet. On 27th August the extraction rate of flour was reduced from 85 per cent, the level in force since the critical days of 1946<sup>1</sup>, to 80 per cent.<sup>2</sup> This was the last move towards the traditional diet during 1950. By mid-summer the effects of the Korean crisis brought relaxation of control to a halt.

4. During the greater part of 1950 the rise in retail prices showed a tendency to slacken; thus prices rose 4 per cent in 1950 as compared with 11 per cent during 1949. But by the end of 1950 it had already begun to appear that this change in the situation was only temporary.

5. In brief, the diet during the earlier months of 1950 showed signs of considerable improvement but towards the end of the year, when the supply position worsened and prices were about to resume their sharp upward course, some difficulty began to be experienced.

6. These various changes in the diet are recorded in the household budgets which were collected by the National Food Survey during the first two months of each quarter during 1950. New methods of analysis, introduced for the first time into the Survey during that year, make it possible to examine these records in the light of social class and family composition, as well as to summarise them as national averages. The new methods are briefly described in the following section. The main trends in food expenditure, consumption and nutrition in 1950 are summarised and finally the position of the different social classes and of households of different family composition is examined.

## II. THE NATIONAL FOOD SURVEY 1950

7. During the course of 1950 an important change was introduced into the technique of the National Food Survey. In most respects that technique remained the same as described for the period 1941 to 1949 in the First Report<sup>3</sup> but during that period the main sample covered only urban working-class households. In 1950 the Survey was extended to cover a sample representing the whole population in both urban and rural areas. With this more representative sample it was not possible, within the resources available, to provide for a monthly survey as formerly. Instead, the sample was visited over a period of about two months each quarter and the results were analysed as quarterly reports. This absence of data for one month out of three has to be kept in mind when "quarterly" and "annual" average figures are quoted in the Report.

8. As in the previous period the Survey data relate to household diets only, with the exclusion of sweets, mineral waters and alcoholic drinks, and despite

<sup>1</sup> First Report, paragraph 164.

<sup>2</sup> That is, a flour which is a mixture of approximately 9 parts of 81 per cent extraction flour and approximately 1 part of 70-72 per cent extraction flour.

<sup>3</sup> Appendix A. The changes introduced in 1950 are discussed in Appendix A of the present Report.

the greater efficiency of the new sampling methods, the population they represent still includes too many children and too few adults compared with the true population. The extent of this bias may be gauged from the fact that during 1950 in the surveyed households the number of children under 14 years of age was on the average 1.0 compared with an estimated actual average of 0.7 per household for Great Britain. There is a further age composition bias arising from the exclusion of hotels, boarding-houses, schools or other institutions from the sample, which results in a small under-representation of older persons. Since this and the former bias are broadly consistent from one year to another, they are of less importance for comparisons through time.

9. The national sample has been analysed according to three types of classification. First, *urban working-class households* have been distinguished from other urban households and from households in rural areas. For this purpose "urban working-class households" have been defined, as in former surveys, mainly by location in a working-class ward<sup>1</sup> and the continuation of this particular analysis makes possible a comparison between the National Food Survey results for 1950 and those for previous years. The composition of the 1950 sample, using this classification, is given in Table 2.

TABLE 2  
Composition of the National Food Survey Sample 1950  
*Urban and Rural Households*

	Number	Percentages
Urban households—		
Working-class ... ..	3,334	70
Other ... ..	503	11
Rural households ... ..	886	19
Total ...	4,723	100

10. In the second place, analyses have been made on the basis of *social class*. The concept of social class is even less clear-cut to-day than before the war, for the re-distribution of incomes has reduced economic differences and the varying degrees of shortage in the supply of consumer goods, together with the varying incidence of price control, have distorted traditional standards. For instance the combination of the housing shortage with the increase in the number and size of incomes accruing to persons other than the head of the household makes it less convenient to accept the income of the head as an index of family standing. Nevertheless, as explained in Appendix A<sup>2</sup>, this index, together with other characteristics assessed by the investigators, has been used to mark off a number of social classes which, for the purpose of this Report, are described as Classes A, B, C and D. Households primarily dependent upon the old age pension form a large significant and homogeneous group falling into Class D, and are treated separately. How far comparison can be made between this analysis and the social class analyses of budgetary data before the war is discussed and illustrated in Appendix C.

11. The social class composition of the 1950 samples, according to these definitions, is given in Table 3. The gross income of the head of the household is also shown.

12. The variations in *household composition* of the different social classes is evident from the table. Because of the importance of household composition

<sup>1</sup> Further details are given in Appendix A, paragraphs 12 and 13.

<sup>2</sup> Paragraphs 13 *et seq.*

**TABLE 3**  
**Composition of the National Food Survey Sample 1950**  
*Social Classes*

Social class range	Class A	Class B	Class C	Class D		All households
				Income of head of household (a week)	Less than £4 10s.	
Income of head of household (a week)	More than £13	£8 to £13	£4 10s. to £8			
				All households	Old age pensioner households only	
Number of households ...	152	603	2,722	1,246	408	4,723
Percentage ... ..	3%	13%	58%	26%	9%	100%
Average number of children under 5 years ...	0.38	0.47	0.60	0.15	—	0.46
Children 5–13 years ...	0.54	0.60	0.66	0.24	—	0.54
Adolescents 14–20 years ...	0.28	0.24	0.31	0.21	—	0.27
Adults ... ..	2.23	2.26	2.31	2.08	1.64	2.24
Persons per household ...	3.43	3.57	3.88	2.68	1.64	3.51
Percentage of all persons in the sample ... ..	3%	13%	64%	20%	4%	100%

in interpreting data on domestic food expenditure, a third analysis based on this variable is desirable. The difficulty is to select a suitable system of classification since household types are widely diverse. For this Report, the importance to the household food budget of the presence of children has suggested the separate analysis of the results for families containing one man and one woman and varying numbers of children under 14 years.<sup>1</sup> As is seen from Table 4, this group of families represents one half of all households in the sample.

<sup>1</sup> Appendix A, paragraph 19 *et seq.*

**TABLE 4**  
**Composition of the National Food Survey Sample 1950**  
*Size and Composition of the Household*

	Households with one man and one woman and						Other households		All households
	No others	One child under 14	Two children under 14	Three children under 14	Four or more children under 14	Total	With children	Without children	
Total number of households	859	637	570	198	112	2,376	1,005	1,342	4,723
Total number of persons ...	1,718	1,911	2,280	990	725	7,624	5,276	3,686	16,586
Average size of household	2.0	3.0	4.0	5.0	6.5	3.2	5.3	2.7	3.5
Percentages (households)...	18%	14%	12%	4%	2%	50%	21%	29%	100%

### III. DOMESTIC FOOD CONSUMPTION AND EXPENDITURE 1950

13. In general, the changes in domestic diet in 1950 were mixed and this was to be expected from the conflicting influences, briefly described in the Introduction, which were at work. The pattern of the diet reflected the improvement both in variety and palatability of food supplies and the trend away from the more bulky foods and the high level of vegetable consumption of the wartime diet and from the high level of fish consumption that characterised the early post-war years. Since prices were also rising, there was a prospect of an increasingly expensive food budget but the increase in its cost was checked by reduced consumption of such expensive items as fish and green vegetables, by the restricted supply of such desirable but increasingly expensive foods as meat, and by the more moderate course of food prices generally during the greater part of 1950 compared with some previous years. In the result, the marked improvement in consumption levels was achieved at a not excessive cost although the combined effect of higher consumption at higher prices produced the largest annual increase in the cost of the average household diet since the end of the war, if the similar increase from 1947 to 1948, when prices were rising rapidly, is excepted.

14. In the following paragraphs the main features of domestic food consumption during 1950 are first considered and an account of food expenditure follows. It is not possible to make a direct comparison with the years immediately preceding 1950 because of the changes in the Survey methods, but the urban working-class diets included in the 1950 sample can be compared with those for earlier years. Food consumption by working-class households and the nutrient value of their diets have been dealt with in the First Report for the period 1940 to 1949. A similar analysis of food expenditure for that period is attached as a Supplement to this Report. With certain qualifications, comparisons are also possible between the Survey data for 1950 and pre-war budgetary data and these are discussed in Appendix C.

#### Domestic Consumption of the Main Foods

15. Table 5 sets out the Survey results for urban working-class households for the five years 1946 to 1950 and also the results in 1950 for the general sample. Most of the recorded differences between the working-class sample and the general sample in 1950 were small. More butter, fresh milk, cheese, eggs, meats other than fresh rationed meat and bacon, fresh green vegetables, fresh fruit and cereals other than bread and flour were consumed by the general sample. The working-class diet included slightly larger quantities of fish, potatoes and other vegetables apart from fresh green vegetables, and bread and flour.

16. Note has been made in the Introduction of the increased food supplies in 1950. The individual foods contributing most of this improvement in the household diet were :

	<i>Percentage increase over 1949</i>
Bacon ... ..	67
Butter ... ..	29
Fresh rationed meat ... ..	21
Eggs ... ..	13

The increases in the consumption of butter and eggs, together with the smaller increases recorded for milk and for cooking fat, were a continuation of the improvement which had been a regular feature of the years since 1946. By contrast, the increase in fresh meat consumption amounted to no more than a

**TABLE 5**  
**Consumption of Main Foods by Urban Working-Class**  
**Households 1946 to 1949 and by all Households for 1950**

*oz. per head per week except where stated otherwise*

	Urban working-class households					Percentages 1946 = 100				ALL households
	1946	1947 (k)	1948 (l)	1949	1950	1947	1948	1949	1950	1950
Fresh milk (pt.) ... ..	4.0	3.9	4.0	4.4	4.6	98	100	110	115	4.8
Cheese ... ..	2.5	2.2	2.0	2.2	2.4	88	80	88	96	2.5
Fresh rationed meat (a) ...	13.7	12.2	11.4	11.4	13.8	89	83	83	101	13.8
Other meat (b) ... ..	9.7	10.5	9.7	8.6	11.5	108	100	89	119	11.5
Beans ... ..	3.2	2.0	2.1	2.7	4.5	62	66	84	141	4.5
Fish ... ..	10.6	9.5	10.0	8.4	6.8	90	94	79	64	6.6
<b>Total meat and fish ...</b>	<b>37.2</b>	<b>34.2</b>	<b>33.2</b>	<b>31.1</b>	<b>36.6</b>	<b>92</b>	<b>89</b>	<b>84</b>	<b>98</b>	<b>36.4</b>
Eggs (c) (No.)... ..	2.5	2.1	2.2	3.0	3.4	84	88	120	136	3.5
Butter ... ..	2.8	2.8	3.2	3.5	4.5	100	114	125	161	4.6
Margarine ... ..	3.5	3.4	3.9	4.2	3.9	97	111	120	111	3.9
Cooking fats (d) ... ..	1.9	1.6	1.8	2.9	3.1	84	95	133	163	3.1
<b>Total fats ... ..</b>	<b>8.2</b>	<b>7.8</b>	<b>8.9</b>	<b>10.6</b>	<b>11.5</b>	<b>95</b>	<b>108</b>	<b>129</b>	<b>140</b>	<b>11.6</b>
Fresh fruit (e) ... ..	13.6	20.6	19.6	19.4	18.0	151	144	143	132	19.2
Potatoes (f) ... ..	70.5	66.2	59.6	65.4	63.3	94	85	93	90	62.0
Fresh green vegetables (g) ...	17.6	12.7	17.4	14.9	13.1	72	99	85	74	13.8
Other vegetables (h) ... ..	20.2	21.7	19.7	19.7	18.2	107	98	98	90	18.1
Bread (i) (as flour) and flour	52.2	53.5	56.8	53.9	51.1	102	109	103	98	51.7
Other cereals (j) ... ..	16.5	16.0	17.8	17.4	16.0	97	108	105	97	16.7
Sugar and preserves ... ..	15.0	15.7	16.4	17.1	15.9	105	109	114	106	16.4

- (a) Excludes canned corned beef.  
 (b) Includes canned corned beef, offals, rabbit and poultry, sausages and miscellaneous cooked and canned meats.  
 (c) Includes dried egg expressed as equivalent number of shell eggs.  
 (d) Includes non-rationed fats such as suet and dripping.  
 (e) Includes tomatoes.  
 (f) Excludes chips and crisps.  
 (g) Includes fresh peas and beans.  
 (h) Includes chips, carrots and other root vegetables, onions and shallots, and canned and dried vegetables.  
 (i) Bread includes rolls, bread crumbs, currant and malt bread, muffins and crumpets (130 oz. bread taken as equivalent to 100 oz. flour).  
 (j) Biscuits, cakes, buns and scones, oatmeal and oat products, breakfast cereals and other farinaceous foods.  
 (k) Nine months' average, adjusted for seasonal trends.  
 (l) Ten months' average, adjusted for seasonal trends.

return to the level of 1946. The fall in the consumption of fish, as compared with 1949 (19 per cent), vegetables (10 per cent) and potatoes (3 per cent) were also in line with a more or less steady decline since 1946 but the fall of 7 per cent in the consumption of sugar and preserves in 1950 interrupted an improvement which up to then had been unbroken since 1946. Fresh fruit consumption in 1950 also showed a recession on the high level reached in 1947 and maintained until 1949. Consumption of bread and flour continued the small but steady decline that had set in after the peak level reached in 1948.

### Domestic Food Expenditure

17. During 1950 the average weekly expenditure per head on food was 14s. 10d. both for all households and for urban working-class households. The greater consumption of self-supplied foods by rural households had the effect of reducing their food purchases enough to off-set, on the average, the higher rate of purchases by urban households outside the working-class. In July and August for example rural households spent 13s. 9d. per head on food and consumed in addition "free"<sup>1</sup> food to the value of about 2s. 5d. Urban households other than working-class spent to the value of 17s. 0d. and obtained food from other sources to the value of about 1s. 0d.

<sup>1</sup> See below, paragraph 20.



18. The comparison with previous years is summarised in Table 6. Expenditure increased by 24 per cent from 1945 to 1949. By 1950 the increase was 35 per cent or 11 per cent above the level of 1949. Increases of a comparable magnitude from one year to another were recorded only in 1944 (8 per cent) and in 1948 (10 per cent). Over the years 1945 to 1949 prices increased by 23 per cent with a further 5 per cent recorded for 1950. Comparison of these expenditure and price trends suggest that the quantum of all food consumed rose by about 2 per cent up to 1949 and by a further 4 per cent in 1950.

**TABLE 6**  
**Urban Working-Class Domestic Food Expenditure and**  
**Price Trends (a) 1942 to 1950**

	1942	1943	1944	1945	1946	1947	1948	1949	1950
Expenditure in pence per head per week (b)	9s. 3d.	9s. 9d.	10s. 7d.	11s. 0d.	11s. 3d.	12s. 0d.	13s. 1d.	13s. 8d.	14s. 10d.
Index 1945 = 100 (c) ...	87.4	89.4	96.5	100.0	102.5	109.8	119.8	125.0	136.3
Price index 1945 = 100	94.3	95.6	98.6	100.0	101.8	108.4	117.0	122.7	128.4

(a) The price index used in this table is discussed in Appendix A of the Supplement to this Report.

(b) Expenditure on all items covered by the Survey.

(c) Calculated on expenditure on items included in the 1945 Survey.

#### Domestic Expenditure on Subsidised Foods

19. During the financial year 1950 to 1951 food subsidies cost £414 million as compared with £425 million in the previous financial year and £484 million for the year ending March 1949, but with higher retail prices and increased consumption, expenditure on subsidised foods by urban working-class households increased, both absolutely and relatively. Table 7 shows that the proportion of all domestic food expenditure represented by the main subsidised foods rose from just under 50 per cent at the beginning of 1949 to nearly 60 per cent by the end of 1950. The average estimated value of the food subsidies for all households during 1950 was 2s. 10d. per head per week.<sup>1</sup>

#### Value of Domestic Food Consumption

20. Domestic food expenditure as recorded by the National Food Survey during 1950 falls short of the total value of food consumption because meals consumed outside the home and foods such as ice cream and sweets were excluded and because contributions from "free" foods (that is, from gardens or allotments or as gifts) and withdrawals from larder stocks were not taken into account. The contribution from "free" foods may be considerable. As regards larder stocks, although these are maintained from purchases and from "free" contributions so that supplies from these two sources will equal consumption in the long run, this may not happen in each week. In addition, there is a well recognised tendency for the housewife to draw upon her stocks during the Survey week since keeping the log book encroaches upon her shopping time. For this reason it is desirable to add the value of larder stock withdrawals to the recorded purchases in order to obtain an estimate of the normal value of purchases. In the Survey records, larder stock withdrawals have been estimated<sup>2</sup> and the contribution of "free" food valued<sup>3</sup> to give an average value for the year of 16s. 6d. per head per week made up as follows:

<sup>1</sup> This figure is lower than that given by dividing the total subsidy bill by a population of 50 million; this result (3s. 2d.) would allow for meals consumed outside the home. It also excludes the value of vitamin products issued free under welfare schemes.

<sup>2</sup> There may be an overestimate for such foods as cooking fat which can be supplied to the larder by the housewife herself during the Survey week. See First Report page 99.

<sup>3</sup> At retail prices current at the time of the Survey. Food such as bottled fruit may be overvalued; in this example the current retail price is likely to be higher than the original cost to the housewife.

**TABLE 7**  
**Expenditure by Urban Working-Class Households on the Main Subsidised Foods 1949 and 1950**

	1949				1950			
	Jan.-Feb.	April-May	July-Aug.	Oct.-Nov.	Jan.-Feb.	April-May	July-Aug.	Oct.-Nov.
Expenditure on main subsidised foods, per head per week ...	6s. 1d.	6s. 11d.	6s. 8d.	7s. 1d.	7s. 11d.	8s. 10d.	8s. 4d.	7s. 9d.
As percentage of average for 1949 ...	91%	103%	99%	106%	118%	132%	124%	116%
As percentage of total food expenditure ...	48%	49%	48%	51%	55%	58%	56%	52%

				<i>Per head per week</i>	
				<i>s.</i>	<i>d.</i>
Recorded domestic expenditure	...	...	...	14	10
Estimated value of "free" food	...	...	...	0	6
Estimated value of food from stock	...	...	...	1	2
<b>Total value</b>				16	6

21. A similar adjustment is not possible for expenditure outside the home or for the much smaller items of personal expenditure mentioned in paragraph 20. Although the National Food Survey records the number of outside meals by each member of the household, other details are beyond the direct knowledge of the housewife and are not required to be set down in the log book. These meals must account for a large part of the weekly food expenditure by those small households whose members regularly eat out. This type of household is under-represented in the sample. For the larger families expenditure on outside meals is less important. It is estimated, for example, that children of school age consume on the average between one-fifth and one-quarter of a school meal per day during the calendar year,<sup>1</sup> and the cost of a school meal is small compared with that of a meal in the usual catering establishment.

22. From information supplied by the Social Survey section of the Central Office of Information it is evident that the frequency with which outside meals are taken varies widely among different groups in the population. About half the adult population of Great Britain never take meals in any kind of catering establishment; less than one-third do so occasionally and only about one-fifth regularly. Those who take such meals regularly form less than one-tenth of all persons in families where the head of household has an income of less than £3 a week and over two-thirds in this group never eat out at all.

#### Domestic Expenditure on the Main Foods

23. Table 8 gives details for 1950 and it is seen that for each of the seventeen groups tabulated expenditure varied little as between the urban working-class and the general samples for the reason given above.<sup>2</sup> According to the records for all households, expenditure was divided amongst the main foods in the following proportions.

				<i>Percentage of total food expenditure 1950</i>	
Milk, cheese and eggs	...	...	...	18	
Meat and fish	...	...	...	27	
Fats, sugar and preserves	...	...	...	10	
Fruit and vegetables	...	...	...	19	
Cereals	...	...	...	18	
<b>Total</b>				92	—

24. Table 8 also shows the urban working-class expenditure on the main foods from 1946 to 1950. Compared with 1949, more money was spent in 1950 on butter, milk, eggs, meat of all kinds including bacon, and on cereals, including bread and flour. Less was spent on vegetables, largely on account of a smaller expenditure on fresh green vegetables. Expenditure on all fats, on liquid milk and on eggs had been rising steadily since 1946. For the other foods listed, the change has been irregular from year to year although, with the exception of fish and fresh green vegetables, the level was higher in 1950 than in 1946.

<sup>1</sup> Including week-ends and school holidays.

<sup>2</sup> Paragraph 17. Further, the under-representation of the smaller households, which are also those generally with a higher expenditure per head, affects the higher social classes more than the other classes in the sample.

TABLE 8

**Expenditure on Main Foods by Urban Working-Class Households  
1946 to 1949 with Expenditure by All Households in 1950**

*d. per head per week*

	1946	1947	1948	1949	1950		%
					Urban working-class households	All households	
Liquid milk ... ..	14.6	14.7	16.6	17.7	19.4	19.6	11
Cheese ... ..	2.0	1.6	1.3	2.0	2.4	2.6	2
Fresh rationed meat (a) ... ..	14.3	13.6	12.5	14.7	19.6	19.5	11
Other meat (b) ... ..	9.4	11.2	9.8	10.0	11.8	11.7	7
Bacon ... ..	4.8	3.3	3.3	4.6	8.1	7.9	4
Fish (including canned) ... ..	11.3	11.0	11.6	9.8	8.1	8.0	5
<b>Total meat and fish ... ..</b>	<b>39.8</b>	<b>39.1</b>	<b>37.2</b>	<b>39.1</b>	<b>47.6</b>	<b>47.1</b>	<b>27</b>
Eggs ... ..	3.4	3.8	5.8	7.5	10.0	9.5	5
Butter ... ..	3.2	3.0	3.0	3.7	5.6	5.6	3
Margarine ... ..	1.9	1.8	2.0	2.4	2.4	2.3	2
Cooking fats (c) ... ..	1.0	1.0	1.4	2.2	2.2	2.2	1
<b>Total fats ... ..</b>	<b>6.1</b>	<b>5.8</b>	<b>6.4</b>	<b>8.3</b>	<b>10.2</b>	<b>10.1</b>	<b>6</b>
Fresh fruit (d) ... ..	7.8	11.9	14.0	12.2	11.0	11.2	6
Potatoes (e) ... ..	5.3	5.4	6.5	7.2	7.2	6.4	4
Fresh green vegetables (f) ... ..	5.5	5.9	5.6	5.2	4.8	4.4	2
Other vegetables (g) ... ..	6.5	8.0	8.1	8.3	8.1	7.8	4
Bread and flour (h) ... ..	11.6	12.2	13.1	13.2	14.3	14.4	8
Other cereals (i) ... ..	12.4	14.1	15.7	17.9	18.6	19.0	11
Sugar and preserves ... ..	5.8	5.8	7.8	8.2	7.6	7.8	4
<b>Total expenditure on above foods ... ..</b>	<b>120.8</b>	<b>128.3</b>	<b>138.1</b>	<b>146.8</b>	<b>161.2</b>	<b>159.9</b>	<b>90</b>
<b>Total expenditure on all foods ... ..</b>	<b>134.8</b>	<b>144.4</b>	<b>157.0</b>	<b>163.9</b>	<b>178.1</b>	<b>178.0</b>	<b>100</b>

(a) Excludes canned corned beef.

(b) Includes canned corned beef, offals, rabbit and poultry, sausages and miscellaneous cooked and canned meats, but not bones or meat products.

(c) Includes non-rationed fats such as suet and dripping.

(d) Includes tomatoes.

(e) Excludes chips and crisps.

(f) Includes fresh peas and beans.

(g) Includes chips, carrots and other root vegetables, onions and shallots, and canned and dried vegetables.

(h) Bread includes rolls, breadcrumbs, currant and malt bread, muffins and crumpets.

(i) Biscuits, cakes, buns and scones, oatmeal and oat products, breakfast cereals and other farinaceous foods.

25. The changes in expenditure from 1946 to 1949 are compared with the movement of prices in Table 9. The extension of these price index numbers into 1950 slightly strains the comparison, since the weights used are the quantities of food purchased by the housewife in 1945, and the diet has been continuously changing since then. More appropriate indexes, based on the

new sample, will be used when the data for 1951, in the Report for that year, are compared with those for 1950. Table 9 will serve to link up these indexes with those for the period before 1950.

26. The substantial increase in expenditure on milk, cheese and eggs as a group, when 1950 is compared with 1949, continued a marked trend evident from 1946 onwards, and was caused by changes both in price and in consumption. The indexes for meat and for the group of fats, sugar and preserves show similar trends. Fish expenditure continued its steep decline from the 1948 level, with prices rising slightly. Expenditure on vegetables and on fruit also declined; with fruit, this decline was associated with little change in price, but vegetable prices maintained their rising trend of the previous years. Expenditure, prices and consumption of cereals appear all to have increased slightly from 1949 to 1950. The general increase in price from 1949 to 1950 for each group was near or below the general increase of 5 per cent (Table 6) but meat prices showed an increase of 8 per cent.

**TABLE 9**  
**Urban Working-Class Households : Food Expenditure and Price Trends,**  
**1945 to 1950 (1945 = 100)**

	1946	1947	1948	1949	1950
<b>Milk, cheese and eggs—</b>					
Expenditure ... ..	96.6	99.3	113.6	130.4	152.2
Price ... ..	100.0	102.5	116.2	122.5	128.7
<b>Meat—</b>					
Expenditure ... ..	100.0	101.6	93.5	103.2	135.4
Price ... ..	100.1	102.4	108.4	121.8	131.6
<b>Fish—</b>					
Expenditure ... ..	112.5	109.3	115.7	97.1	81.1
Price ... ..	100.7	107.3	113.9	113.7	117.1
<b>Fats, Sugar, Preserves—</b>					
Expenditure ... ..	104.1	101.2	124.4	145.8	156.6
Price ... ..	99.1	97.4	108.3	113.5	117.8
<b>Vegetables—</b>					
Expenditure ... ..	101.7	113.0	118.3	121.4	117.1
Price ... ..	102.3	122.9	124.6	129.5	132.7
<b>Fruit—</b>					
Expenditure ... ..	112.6	170.7	206.9	185.5	168.5
Price ... ..	104.8	110.5	124.5	113.5	113.7
<b>Cereals—</b>					
Expenditure ... ..	100.8	111.6	129.9	131.5	139.3
Price ... ..	106.3	117.5	124.4	131.7	138.4
<b>Beverages and miscellaneous</b>					
<b>Foods (a)—</b>					
Expenditure ... ..	113.7	113.2	131.8	133.8	138.6
Price ... ..	101.1	105.8	121.8	123.8	123.4
<b>All foods—</b>					
Expenditure ... ..	102.5	109.8	119.8	125.0	136.3
Price ... ..	101.8	108.4	117.0	122.7	128.4

(a) Excluding items for which expenditure only was recorded.

## IV. ENERGY VALUE AND NUTRIENT CONTENT OF THE HOUSEHOLD DIET 1950

27. In the following section the main trends in the nutritional value of the household diet which occurred during 1950 are discussed. For this purpose, the energy value and nutrient content of the diet for 1950 have been calculated according to the method already described in the First Report.<sup>1</sup>

28. Changes were made in the National Food Survey at the beginning of 1950. These have already been described<sup>2</sup> and in the discussion on food expenditure, prices and consumption, the urban working-class households have been separated from the rest so that data for such households may be compared over a series of years. The energy value and nutrient composition of the diets of urban working-class households for the years 1946 to 1950 are shown in Table 10 and compared with those for all households in 1950. No allowance is made in this table for cooking losses.

29. It will be seen that the energy value and fat, calcium and vitamin A contents of the urban working-class household diet were greater in 1950 than in any of the four preceding years. Total protein and riboflavin remained fairly constant during the years under review, animal protein having decreased during the preceding three years and regained the 1946 figure in 1950; iron decreased from 1946 to 1950; vitamin B<sub>1</sub> was less in 1950 than in any of the previous four years; nicotinic acid decreased by more than 10 per cent in 1947 and remained at this figure; vitamin C after having risen well above the 1946 figure was 9 per cent below that level in 1950; and vitamin D content was smaller in 1950 than in any other year under review.

30. These trends are the result of a number of changes with conflicting effects on the composition of the household diet. Those which have had the most marked effects were the steadily increasing milk consumption, the decreased consumption of meat and bacon during the years 1947 to 1949 followed by an increase in 1950, the increased consumption of fats from 1947 onwards, the decreased consumption of cereals from 1948 onwards coupled with the reduction in the extraction rate of flour from 85 to 80<sup>3</sup> per cent in August 1950, and the gradual decrease after 1946 in the consumption of potatoes and other vegetables.

31. Probably the most marked change in the diet in 1950 was an increase in the fat content by 7 per cent compared with 1949 and the protein content by 1 per cent (protein from animal sources by 9 per cent), although the energy value remained almost unchanged. In other words, total energy needs appear to have been satisfied by an increase in the consumption of bacon, meat, eggs and milk, cheese and fats, and a decrease in that of bread and other cereals, potatoes and other vegetables and sugar and preserves. These changes are in the main those which increase the palatability and attractiveness of the diet. It will be noted that compared with 1949 there was with one exception an increase in all foods of animal origin; bacon increased by 67 per cent and other meats by 11 per cent; increases were also recorded for eggs, 12 per cent, cheese, 9 per cent and milk, 5 per cent. The exception was a decrease in the consumption of fish by 19 per cent. These changes accounted for the increase of 3 g. per person per day of animal protein.

<sup>1</sup> First Report, paragraph 117.

<sup>2</sup> Paragraphs 7 *et seq.*, above.

<sup>3</sup> See footnote to paragraph 3 above.

**TABLE 10**  
**Energy Value and Nutrient Content of Domestic Food Consumption: Urban Working-Class Households 1946 to 1950**  
**and all Households 1950**  
*per head per day*

	Urban working-class households										Percentages 1946=100				All households				
	1946-1950					1949-1950					1947-1948		1949-1950		1950				
	1946	1947	1948	1949	1950	1946	1947	1948	1949	1950	1947	1948	1949	1950	1947	1948	1949	1950	
Energy value	2,307	2,308	2,387	2,425	2,441	2,308	2,308	2,387	2,425	2,441	100	103	105	106	100	103	105	106	2,474
Total protein	78	77	77	76	77	77	77	77	76	77	99	99	97	99	99	99	97	99	78
Animal protein	37	36	34	34	37	36	34	34	34	37	97	92	92	100	92	92	92	100	38
Fat	86	82	88	95	102	82	88	88	95	102	95	102	110	119	101	102	110	119	101
Calcium	912	996	1,012	1,030	1,041	996	1,012	1,012	1,030	1,041	109	111	113	114	101	111	113	114	1,066
Iron	14.4	14.3	14.2	13.6	13.5	14.3	14.2	14.2	13.6	13.5	99	99	94	94	94	99	94	94	13.6
Vitamin A (a)	3,112	3,148	3,380	3,377	3,465	3,148	3,380	3,380	3,377	3,465	101	109	109	111	101	109	109	111	3,336
Vitamin B <sub>1</sub>	1.55	1.52	1.57	1.53	1.50	1.52	1.57	1.57	1.53	1.50	98	101	99	97	99	101	99	97	1.51
Riboflavin	1.65	1.64	1.65	1.64	1.66	1.64	1.65	1.65	1.64	1.66	99	100	99	101	99	100	99	101	1.69
Nicotinic acid	14.5	12.9	12.8	12.7	12.9	12.9	12.8	12.7	12.7	12.9	82	88	88	89	88	88	88	89	13.0
Vitamin C (a)	90	78	97	91	82	78	97	91	91	82	87	106	101	91	87	106	101	91	84
Vitamin D (a)	182	178	198	190	168	178	198	198	190	168	98	109	104	92	98	109	104	92	172

(a) Includes vitamin welfare foods.



32. The amount of calcium in the diet continued to rise in 1950 because the increased milk and cheese consumption more than compensated for the decreased consumption of flour and bread which since 1946 have been fortified with calcium carbonate at the rate of 14 oz. per 280 lb. flour, but the lower consumption of bread and flour and other cereals, together with the reduction of the extraction in flour in August 1950, resulted in a reduced iron and vitamin B<sub>1</sub> content in the diet and would have also produced a lower riboflavin and nicotinic acid content had not milk more than counteracted the loss of riboflavin, and meats the loss of nicotinic acid.

33. The vitamin A content of the diet compared with that of 1949 was higher mainly because of the increased consumption of butter. The vitamin D content was reduced by the decreased consumption of fatty fish, fish liver oil, and margarine for which the increased consumption of butter and eggs provided insufficient compensation. The decreased vitamin C content resulted from the smaller consumption of potatoes, fresh vegetables and fresh fruit: compared with 1949, a decrease of 3 per cent was recorded for potatoes, 12 per cent for fresh green vegetables, 8 per cent for other vegetables and 7 per cent for fresh fruit. There was no compensation for these losses from the increased consumption of other foods.

## V. SEASONAL CHANGES IN DOMESTIC FOOD CONSUMPTION AND EXPENDITURE AND IN NUTRITIONAL LEVELS DURING 1950

34. An examination of seasonal changes during 1950 is complicated by the absence of one month's data in each quarter and by the lack of exact comparison with earlier years, because of the wider sample used in 1950. The general seasonal pattern is nevertheless shown by the 1950 records and for fresh green vegetables, where the seasonal variation is most marked, information for earlier years, based on urban working-class records only, has also been analysed. Details of food quantities and expenditure for 1950 are set out in Appendix D and tables in the text show the energy value and nutrient content.

### Food Consumption and Expenditure: General

35. The principal foods are seen from Table 11 to fall into three groups according to the degree of seasonal variation in consumption. Variations as much as 25 to 50 per cent from the annual average were recorded for shell eggs, fresh green vegetables, other vegetables apart from potatoes, and fruit. For fish and potatoes the variation was about 10 per cent and for the remaining foods a few per cent only. The foods are listed approximately according to magnitude of variation, although it must be remembered that the data refer to one year only; in another year the order would probably be different in detail for those foods where the variations are very small.

36. Seasonal variation in total consumption is measured in part by the value of consumption although this figure also reflects changes in price. Price changes are discussed below. The following table (Table 12), giving the value

**TABLE 11**  
**Seasonal Variation in the Consumption of Principal Foods 1950**  
**expressed as percentages of the annual average**

	Jan.-Feb.	April-May	July-Aug.	Oct.-Nov.
I. Shell eggs ... ..	89	145	108	59
Fresh green vegetables ...	70	71	162	96
Other vegetables (except potatoes) ... ..	112	89	79	120
Fruit ... ..	101	75	122	102
II. Fish ... ..	111	92	90	106
Potatoes (including chips and crisps)... ..	107	103	88	102
III. Beverages ... ..	104	101	96	98
Meat ... ..	102	97	98	103
Sugar and preserves ... ..	100	100	103	97
Milk (total) ... ..	100	103	100	98
Cheese ... ..	101	101	98	100
Fats ... ..	99	100	102	99
Cereals ... ..	101	101	99	99

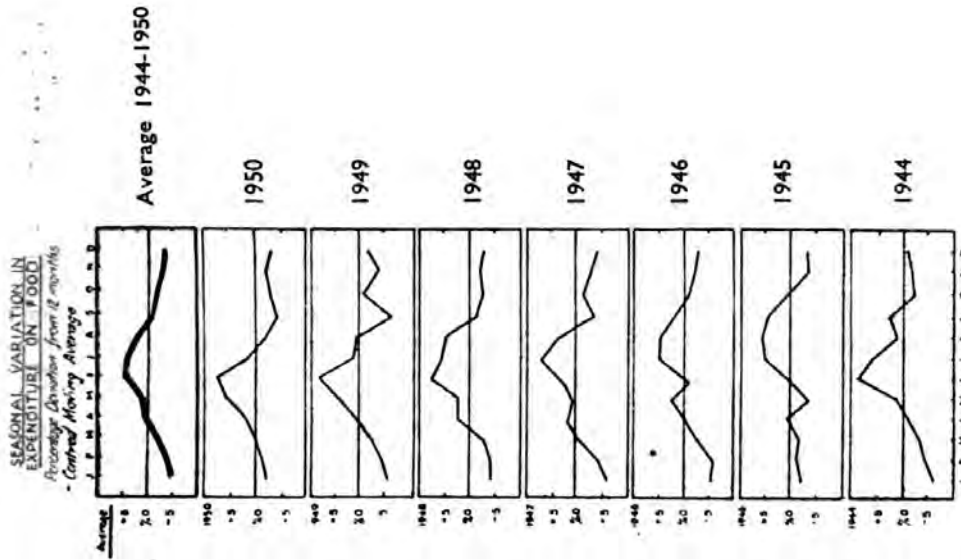
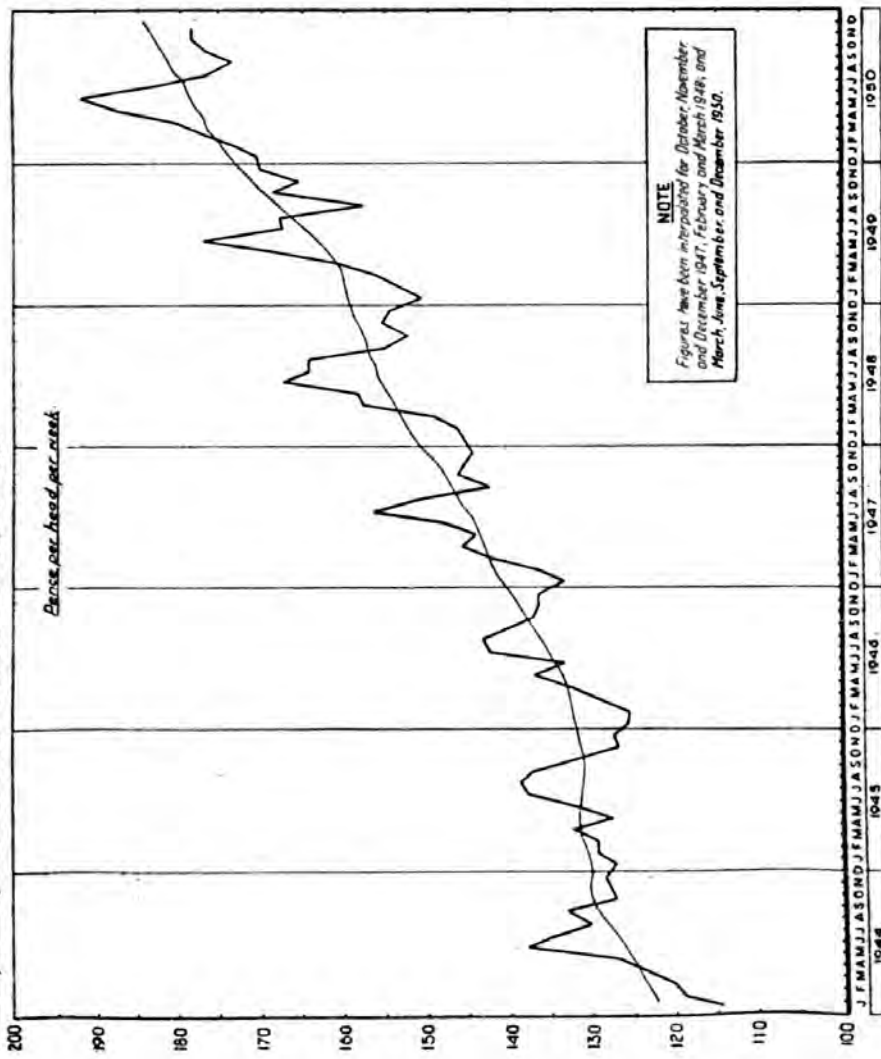
of consumption, is useful in showing also the seasonal changes in the contribution of home-supplied foods and of larder stock withdrawals to total consumption. It is seen that the level of total consumption varied little from one season to another. Expenditure, on the other hand, followed a highly seasonal pattern, with offsetting variations in supplies of "free" food and in larder stock withdrawals. As larger quantities of eggs, fresh vegetables, new potatoes and fish came on to the market in spring and summer, there was less need to draw upon foods which can be easily stored. Nevertheless, the pattern was not uniform throughout the population. Larder stock withdrawals varied considerably between one social class and another with the result, shown below in Table 28, that for Class A the value of total consumption was lowest in April-May and July-August, and for Class D it was lowest in the autumn and winter periods.

**TABLE 12**  
**Value of Household Food Consumption 1950 (All Households)**

	<i>per head per week</i>				
	Jan.-Feb.	April-May	July-Aug.	Oct.-Nov.	Annual average
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Recorded household expenditure ... ..	14 4	15 2	14 11	14 9	14 10
Estimated value of free food... ..	0 4	0 5	0 10	0 4	0 6
Estimated value of food from stock ... ..	1 8	0 10	1 0	1 3	1 2
Total value ... ..	16 4	16 5	16 9	16 4	16 6

37. The seasonal pattern of expenditure can be examined over a period of years by reference to the budgets of urban working-class households and the results are set out in the accompanying Chart. From 1944 to 1947 the dominant feature was the summer peak occurring in July; subsequently this peak occurred in June. A subsidiary feature in a number of years was the smaller

**EXPENDITURE ON FOOD 1944-1950 (Urban Working-Class Households)**  
*Monthly Average and 12 months Centred Moving Average*



peak in the spring, usually in April. How far 1950 urban working-class diets conformed to the seasonal pattern of the previous years is also indicated in the Chart, with interpolated figures for the missing months. For the Survey periods only, the comparable levels are shown in Table 13. The year 1950 was distinguished by a considerable rise in expenditure in the spring which probably continued into the early summer, similar to the pattern of 1944 and 1949, instead of halting before rising to a higher peak in the summer as in other years. For all households, the rise in expenditure during the spring was even more remarkable: from 14s. 4d. in January and February to 15s. 2d. in April and May. By July and August expenditure had fallen to 14s. 11d. and further to 14s. 9d. in October and November. The similarity in this regard of 1944, 1949 and 1950 may be attributed to the fact that they were all years of more than average variety in food supplies. On the other hand, vegetable supplies exert a considerable influence on the seasonality of total food expenditure and whether they are early or late, plentiful or otherwise, will go far to determine when the peak of total food expenditure occurs.

**TABLE 13**  
**Urban Working-Class Domestic Expenditure 1947 to 1950:**  
**seasonal differences from the trend (a)**

*d. per head per day*

	Jan.-Feb.	April-May	July-Aug.	Oct.-Nov.
1947 ... ..	-6.4	+1.1	+7.1	-3.4 (b)
1948 ... ..	-4.9	+2.0	+9.6	-4.6
1949 ... ..	-7.7	+4.1	+2.1	-3.0
Average 1947 to 1949 ...	-6.3	+2.4	+6.3	-3.3
1950 ... ..	-2.2	+6.7	(c)	-4.7

(a) 12 months moving average.

(b) Estimated; during these months there was a break in the continuity of the survey.

(c) Negligible.

38. For examining the variations in expenditure on the main groups of foods during 1950, and the influence of price, indexes have been calculated and are shown in Table 14 with January and February as 100. An exception has been made for fresh fruit and vegetables for which seasonal variations in supplies are of such magnitude as to make a seasonal price index impracticable; expenditure and prices for these foods are examined in separate detail in paragraphs 48 to 54 below. Because the prices used in calculating the index are averages for food groups there may be some tendency for the index to under-estimate upward change.<sup>1</sup>

39. Table 14 illustrates the effect of fresh vegetables and fruit on total food expenditure for when these are excluded the summer expenditure peak is replaced by a double peak in spring and autumn. For the foods shown in Table 14, the high expenditure in the spring was the result of increased consumption rather than of price changes and particularly of the increased consumption of eggs; but from the spring onwards most prices also rose steadily. The rise was particularly marked in the summer for fish and for fruit other than fresh fruit. By the autumn, all prices with the exception of those for cheese had risen, fish and eggs showing the largest increases of 10 per cent and 11 per cent. The weighted average increase in price for all the foods listed in the Table was 5 per cent.

<sup>1</sup> See Appendix B.

40. For the majority of foods the index of expenditure also rose during the year. Apart from fruit other than fresh fruit (71 per cent) and cheese (12 per cent) the increases were all less than 10 per cent. Of the foods for which decreased expenditure was recorded in the autumn months, eggs showed the greatest fall (34 per cent). The only other decreases, each of about 5 per cent, were for the minor food group of vegetables other than fresh vegetables and for the group of miscellaneous foods including beverages. Expenditure on all the foods listed in the Table rose by 4 per cent between January-February and October-November and by rather less than this if stock withdrawals are taken into account. Since the combined price index rose by as much as 5 per cent, the standard of consumption probably declined slightly.

TABLE 14

Seasonal Indexes (a) of Food Prices and Expenditure by all Households  
1950 (fresh fruit and fresh vegetables excepted)

	Index of prices Jan.-Feb. = 100			Index of expenditure Jan.-Feb. = 100		
	April- May	July- Aug.	Oct.- Nov.	April- May	July- Aug.	Oct.- Nov.
Milk (total) ... ..	100	101	102	103	100	100
Cheese ... ..	100	99	100	108	102	112
Eggs ... ..	91	93	111	147	103	66
Meat ... ..	100	103	107	99	105	109
Fish ... ..	100	106	110	88	88	102
Fats, sugar and preserves	102	105	108	109	111	109
Cereals ... ..	100	101	103	106	103	110
Vegetables, other than fresh vegetables ... ..	102	105	105	111	75	95
Fruit, other than fresh fruit	94	105	101	122	125	171
Beverages and miscella- neous foods ... ..	99	99	103	97	83	95
Weighted average ...	100	102	105	105	102	104

(a) See Appendix B.

Food Consumption and Expenditure : Main Foods in Detail

41. Little comment is required on most of the foods in the third group mentioned in paragraph 35 since seasonal variations were small as the result, in a number of instances, of rationing. The consumption of meat remained almost unchanged during the year because the increased consumption of unrationed meats offset the fall in the ration in the autumn. Since the unrationed meats were expensive, both the price level and the level of expenditure eventually increased by 7 per cent and 9 per cent compared with January and February. There were also ration changes for fats although total consumption remained largely constant. When the butter ration was increased in April from an average of 4 oz. a week to 5 oz., the housewife bought the additional quantity in spite of a price increase from 1s. 6d. to 1s. 10d. a lb. and margarine consumption fell. Butter prices were increased further in September to 2s. 0d. ; the ration was reduced to its former level and the housewife continued to purchase it in full. The effect of these changes was an increase of 16 per cent in total fats expenditure in October and November compared with the beginning of the year.

42. Despite the later shortage of rationed meats, fish consumption, after recovering from a marked decline in the summer, failed to regain the levels of January and February. After prices were de-controlled in April their

general level, which had remained steady up to that time, rose by 6 per cent in July and August and by a further 4 per cent in October and November. Consumption of the more expensive fish continued to fall, but the price increases checked the decline in expenditure. By October and November consumption of fat fish once more increased, and expenditure regained and slightly exceeded the January and February level.

43. The average number of eggs consumed per head each week by the general sample was 3.5 but the range, from 5 in spring to 2 in the autumn, was 84 per cent of the average. Consumption was almost entirely in the form of shell eggs. Compared with the variations in consumption, price changes were less marked; the combined result was a maximum expenditure in the spring of 13.4*d.* and an expenditure of 6.0*d.* in the autumn.

44. In order to examine the variations in vegetable and fruit consumption, Tables 15 and 16 summarise the Survey results at each season and give details of the "free" supplies obtained mainly from gardens and allotments. For these foods, the lack of data for the month of June presents a special difficulty, but since the urban working-class records for the previous four or five years suggest the seasonal fall in potato consumption to be greatest in July and the seasonal rise in fresh green vegetable consumption to be greatest in July and August, the 1950 records can provide a fairly accurate picture.

45. In 1950 the fall in potato consumption in July and August, which is characteristic of this vegetable, amounted to 12 per cent of the average. It results partly from the habit of consuming lighter meals in the home at this time of the year and partly from the fact that new potatoes at this season are both more expensive and less wasteful, so that the housewife buys less. Further, at this season in 1950 the meat ration was unusually low and analysis of the National Food Survey data suggests that the demand for potatoes is directly related to the supply of fresh meat. During July and August, gardens and allotments provided as much as 13.5 per cent of the total potato consumption. For potatoes as for other fresh vegetables the average contribution from gardens and allotments, based on a sample of all households, substantially underestimates the position of households possessing these amenities for they represent only half of the total.

46. It will be seen from Table 5 that, since the war, the consumption of fresh green vegetables had been declining, the National Food Survey records for urban working-class households showing that by 1949 consumption was only six-sevenths of the 1946 level.<sup>1</sup> The seasonal changes recorded for the previous

<sup>1</sup> As will be seen from the following percentages, fresh legumes were an exception to this trend. The position fluctuates substantially from one year to another but the years 1946 and 1949 were neither particularly good nor bad for these vegetables. The figures also show the relative importance of the different varieties of fresh green vegetables for the years 1946 to 1949. Cabbage types represented about one half of the total annual consumption by urban working-class households.

	Percentage of total consumption annual average 1946 to 1949	Percentage change in consumption 1949 compared with 1946
Cabbage types ... ..	48	-13
Fresh legumes ... ..	19	+ 7
Cauliflower ... ..	13	-27
Brussels sprouts ... ..	13	-28
Leafy salads ... ..	7	-12

four years show clearly that the quantity increases abruptly during June to a high level in July and August. The change was even greater during 1950 as is evident from the following comparison :

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual average
Urban working class households 1946 to 1949 ... .. oz.	13·6	12·0	11·4	13·3	14·7	17·7	21·9	21·9	16·5	16·2	14·4	13·0	15·6
Average ... ..	12·8			14·0			21·9			15·3			
All households 1950 oz.	9·6			9·9			22·4			13·3			13·8

The records show that a seasonal rise in price tends to accompany the seasonal increase in consumption. For cabbage alone, the consumption of which remained about the same in 1950 as in 1946 to 1949, prices usually increased by about 25 per cent from January–February to April–May.

47. In 1950, cabbage provided about two-fifths of the fresh green vegetables, at a constant level from season to season of 5 to 6 oz. per head per week. The consumption of fresh peas and beans was limited mainly to the summer months ; in July and August nearly 13 oz. were consumed per head per week, or nearly 60 per cent of the total quantity of fresh green vegetables consumed at that

TABLE 15  
Domestic Consumption of Vegetables including " free " (a) supplies 1950  
(All Households)

					<i>oz per head per week</i>				
					Jan.–Feb.	April–May	July–Aug.	Oct.–Nov.	Annual average
<b>POTATOES (b)</b>									
Consumption	...	...	...	...	68·68	66·27	56·26	65·44	64·16
" Free "	...	...	...	...	0·07	0·95	8·80	0·97	2·70
<b>CABBAGE</b>									
Consumption	...	...	...	...	5·01	4·95	5·41	5·86	5·31
" Free "	...	...	...	...	0·66	0·69	1·75	2·09	1·30
<b>FRESH PEAS AND BEANS</b>									
Consumption	...	...	...	...	0·08	0·14	12·84	0·25	3·33
" Free "	...	...	...	...	—	—	4·61	0·11	1·18
<b>OTHER FRESH GREEN VEGETABLES (c)</b>									
Consumption	...	...	...	...	4·52	4·76	4·16	7·21	5·17
" Free "	...	...	...	...	0·84	0·84	1·28	1·30	1·06
<b>TOTAL FRESH GREEN VEGETABLES</b>									
Consumption	...	...	...	...	9·61	9·85	22·41	13·32	13·81
" Free "	...	...	...	...	1·50	1·53	7·64	3·50	3·54
<b>OTHER VEGETABLES (d)</b>									
Consumption	...	...	...	...	17·87	14·17	12·54	19·19	15·93
" Free "	...	...	...	...	0·58	0·32	2·18	1·44	1·13
<b>TOTAL ALL VEGETABLES EXCLUDING POTATOES</b>									
Consumption	...	...	...	...	27·48	24·02	34·95	32·51	29·74
" Free "	...	...	...	...	2·08	1·85	9·82	4·94	4·67

(a) Obtained otherwise than by purchase ; usually from gardens or allotments, and included in the consumption figures.

(b) Includes chips and crisps.

(c) Brussels sprouts, cauliflower, leafy salads and other fresh green vegetables.

(d) Carrots, other roots, onions and miscellaneous fresh vegetables, dried and canned pulses and other canned vegetables and vegetable products.



time. Other fresh green vegetables made their largest combined contribution in October and November (7.2 oz.) although the peak consumption of leafy salads (2.5 oz.) occurred in July and August. As the result of these variations, the total consumption of fresh green vegetables, which averaged 13.8 oz. for the whole year, fluctuated from 9.6 oz. in January and February to 22.4 oz. in July and August. The consumption of vegetables other than fresh green vegetables showed less change from one season to another, with 12.5 oz. recorded for July and August and 19.2 oz. for October and November. Of the high consumption in the autumn, carrots, other roots and onions accounted each for about 4 oz. or, together, for about two-thirds of the total. Vegetables from gardens and allotments were an important source of supply throughout the year and contributed one-third of the consumption of all fresh green vegetables in July and August and one-quarter in October and November.

48. Vegetables of all kinds accounted for about 11 per cent of total food expenditure during the Survey periods in 1950. This percentage varied with the season between 9 per cent and 13 per cent, and actual weekly expenditure between 16.2*d.* per head and 22.8*d.* Details of the seasonal changes are set out in Table 16 together with the average prices paid by the housewife. The omission of the month of June again raises difficulties in establishing the seasonal pattern, but the records for urban working-class households during 1946 to 1949 show that the highest level was reached in May, June and July. In 1950, also, the peak occurred about this time although probably earlier than shown by the average for the previous years. If this was so, it would partly explain why the peak in food expenditure generally occurred earlier than usual that year.

49. For potatoes and for fresh green vegetables, the average weekly expenditure per head by urban working-class households during 1946 to 1949 was :

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual average
Potatoes ... ..	<i>d.</i> 5.1	<i>d.</i> 5.2	<i>d.</i> 5.3	<i>d.</i> 5.8	<i>d.</i> 6.8	<i>d.</i> 9.1	<i>d.</i> 7.7	<i>d.</i> 5.6	<i>d.</i> 5.0	<i>d.</i> 5.1	<i>d.</i> 5.5	<i>d.</i> 5.4	<i>d.</i> 6.0
Fresh green vegetables ... ..	4.4	4.1	4.6	6.4	6.6	6.9	7.9	6.6	4.8	4.5	4.2	4.2	5.5
Total ... ..	9.5	9.3	9.9	12.2	13.4	15.0	15.6	12.2	9.8	9.6	9.7	9.6	11.5

The variations in potato expenditure during the summer, chiefly the result of the high prices of new potatoes, are seen to have been an important cause of the high level of total expenditure on vegetables at that season ; expenditure on potatoes in June was 50 per cent above the average for the year as a whole and over 15 per cent more than expenditure on fresh green vegetables during the same month. In Table 16 it is seen that a similar pattern emerged in 1950 although the average price paid for potatoes was higher in July and August than in April and May.

50. During 1946 to 1949 the peak expenditure per head on fresh green vegetables by the urban working-class households occurred on the average in June and July ; 7.9*d.* was recorded for each month and low points of 4.1*d.* in February and 4.2*d.* in November and December with an annual average of 5.4*d.* In 1950, for the Survey periods, the annual average for all households was 4.2*d.* with the highest level reached in April and May at 5.6*d.* The following comparison with the pattern of the previous four years suggests once again that the peak expenditure on fresh green vegetables may have occurred earlier than usual in 1950, and that the rise in April and May may not have been much below the actual peak.

TABLE 16  
**Fresh Fruit and Vegetables 1950**  
*Seasonal Trends in Domestic Expenditure and Prices (All Households)*

	Average prices (d. per lb.)				Expenditure (d. per head per week)				Average of four periods
	Jan.-Feb.	April-May	July-Aug.	Oct.-Nov.	Jan.-Feb.	April-May	July-Aug.	Oct.-Nov.	
<b>FRESH VEGETABLES</b>									
Potatoes ...	1.6	2.2	2.4	1.6	6.1	7.9	6.4	5.2	6.4
Carrots ...	2.2	9.1	5.1	2.9	0.4	0.6	0.5	0.6	0.5
Other root vegetables ...	3.4	4.3	5.6	3.0	0.6	0.4	0.3	0.6	0.5
Cabbage types ...	6.6	8.9	3.9	3.3	1.7	2.4	0.8	0.6	1.4
Brussels sprouts ...	11.2	(a)	(9.0)	6.5	1.2	-	...	1.4	0.6
Cauliflower ...	10.5	9.4	6.9	5.9	1.0	1.4	0.5	0.8	0.9
Leafy salads ...	29.1	23.4	9.0	19.0	0.4	1.6	0.7	0.3	0.8
Fresh peas and beans ...	20.1	16.8	5.3	13.7	0.1	0.1	2.5	0.1	0.7
Other green vegetables ...	(8.3)	8.8	(5.9)	(5.8)	...	0.1	...	...	...
Onions, etc. ...	5.9	8.5	5.5	4.8	1.3	1.5	0.8	1.0	1.2
Miscellaneous fresh vegetables ...	15.1	21.5	8.8	11.9	0.4	1.1	0.8	0.7	0.8
<b>Totals</b> ...					13.2	17.1	13.3	11.3	13.8
<b>FRESH FRUIT</b>									
Tomatoes ...	15.6	18.3	14.7	14.0	2.4	3.9	6.6	3.5	4.1
Citrus fruit ...	8.6	9.6	10.2	9.5	2.5	1.2	1.5	1.5	1.7
Apples and pears ...	8.5	10.8	8.4	8.9	3.2	2.2	2.8	4.1	3.1
Stone fruit ...	25.0	17.1	10.1	(6.0)	0.1	0.1	1.7	...	0.5
Soft fruit ...	29.8	25.1	15.7	19.2	0.1	0.3	1.9	0.5	0.7
Bananas ...	12.0	12.0	12.1	12.1	1.0	0.5	0.9	1.2	0.9
Other fresh fruits ...	9.4	5.4	5.5	(7.8)	0.2	0.5	0.1	...	0.2
<b>Totals</b> ...					9.5	8.7	15.5	10.8	11.2

(a) Not available.  
 (b) Prices given in brackets are based on a very small number of purchases.  
 ... Less than 0.05.

	Jan.-Feb.	April-May	July-Aug.	Oct.-Nov.
	<i>d.</i>	<i>d.</i>	<i>d.</i>	<i>d.</i>
Urban working-class households 1946 to 1949 (average) ...	4.3	6.5	7.3	4.4
All households 1950 ... ..	4.4	5.6	4.5	3.2

51. The seasonal variations in weekly expenditure per head on different varieties of fresh green vegetables were considerable. Expenditure on Brussels sprouts was notable in January-February and October-November only, and on fresh peas and beans in July-August. For cabbage types, expenditure varied between 0.6*d.* and 2.4*d.*, at prices per lb. of 3.3*d.* and 8.7*d.*; expenditure on cauliflower ranged from 0.5*d.* (price 6.9*d.*) to 1.4*d.* (price 9.4*d.*) and leafy salads from 0.3*d.* to 1.6*d.* with prices at 19.0*d.* and 23.4*d.* In the cheapest season for leafy salads (9.0*d.* in July and August) expenditure was only 0.7*d.* It is evident that for these vegetables seasonal expenditure was mainly conditioned by the supply position and the following percentages of total expenditure show the main effect of the seasonal changes in supply :

	Jan.-Feb.	April-May	July-Aug.	Oct.-Nov.	Annual average
	%	%	%	%	%
Cabbage types ... ..	39	43	18	21	32
Brussels sprouts ... ..	27	—	—	42	14
Cauliflower... ..	23	25	11	25	20
Leafy salads ... ..	9	28	15	9	18
Fresh peas and beans ...	2	2	56	3	16
Other fresh green vegetables	—	2	—	—	—
	100	100	100	100	100

In late winter, cabbage predominated with over one-third of the expenditure but Brussels sprouts and cauliflower were also of importance. In spring, leafy salads took the place of Brussels sprouts and in the high summer over half of the expenditure was on peas and beans. By the autumn, Brussels sprouts accounted for the largest share, nearly one-half, and cauliflower for one-quarter. On the average for the whole year, as represented in the Survey periods, cabbage accounted for about one-third of all domestic expenditure on fresh vegetables.

52. Fruit consumption is also highly seasonal: in 1950 the lowest level recorded was in April and May at 17.1 oz. per head per week (Table 17) and the highest in July and August at 27.9 oz. mainly because of the increased consumption of tomatoes, and of stone and soft fruit. The level for January and February was relatively high because of the plentiful supplies of citrus fruit; at that time consumption was twice as high as at other seasons. Stone and soft fruit are mainly a summer food and 5.6 oz. were consumed in the home during July and August of 1950. Of this quantity, nearly one-quarter was obtained from gardens and allotments. Tomato consumption ranged from 2.8 oz. in January and February to 8 oz. in July and August, and that of apples and pears from 3.6 in April and May to 10.1 oz. in the autumn months. The contribution of "free" sources to these supplies was very small.

TABLE 17

## Domestic Consumption of Fruit and Nuts including "free" (a) supplies 1950

oz per head per week

	Jan.- Feb.	April- May	July- Aug.	Oct.- Nov.	Annual average
<b>TOMATOES</b>					
Consumption ... ..	2.79	3.56	7.98	4.78	4.78
"Free" ... ..	—	0.01	0.38	0.23	0.16
<b>CITRUS FRUITS</b>					
Consumption ... ..	5.64	2.24	2.47	2.73	3.27
<b>APPLES AND PEARS</b>					
Consumption ... ..	7.97	4.63	6.64	10.13	7.09
"Free" ... ..	0.01	—	0.90	0.29	0.30
<b>STONE AND SOFT FRUIT</b>					
Consumption ... ..	0.17	0.37	5.61	0.52	1.67
"Free" ... ..	—	—	1.26	0.05	0.33
<b>OTHER FRUIT AND FRUIT PRODUCTS</b>					
<b>NUTS AND NUT PRODUCTS</b>					
Consumption ... ..	6.47	7.30	5.20	5.28	6.06
"Free" ... ..	—	1.05	0.78	0.01	0.46
<b>Total consumption ... ..</b>	<b>23.04</b>	<b>17.10</b>	<b>27.90</b>	<b>23.44</b>	<b>22.87</b>

(a) Obtained otherwise than by purchase, and included in the consumption figures.

53. The variation in seasonal expenditure on fruit was also considerable and a range was recorded of 11.2 to 18.3*d.* per head per week round an average of 14.1*d.* In the summer, fruit represented 10 per cent of total domestic expenditure on food and in the winter 7 to 8 per cent. The greater part of fruit expenditure was incurred on fresh fruit (Table 16) with an average of 11.2*d.* for the year, and variations at each season of 9.5*d.*, 8.7*d.*, 15.5*d.* and 10.8*d.* With the exception of 3.6*d.* spent on stone and soft fruit during July and August, most of this expenditure was on tomatoes (annual average of 4.1*d.*), citrus fruits (1.7*d.*) and apples and pears (3.1*d.*), all of which were available at each season.

54. It is also clear from Table 16 that expenditure on fresh fruit resembled that on fresh green vegetables in being largely dependent upon supply. The increase in price of tomatoes in the spring was accompanied by a more than proportionate increase in expenditure; conversely, the fall in the autumn price compared with the summer was small, but expenditure declined by 47 per cent. Similarly, when apples and pears increased in price by 6 per cent from July and August to October and November, expenditure increased by 46 per cent.

#### Energy Value and Nutrient Content of the Household Diet 1950

55. The energy value and nutrient composition of the food consumed by all households have been calculated for the first two months of each quarter in 1950. The results, with no allowance for cooking losses, are shown in Table 18.

56. The Tables show a small reduction in the energy value of the diet during the course of the year, a sudden decrease of about 10 per cent in iron, vitamin B<sub>1</sub> and riboflavin in the fourth period and fluctuations in the contents of vitamins A, C and D throughout the year. It is of interest to examine these changes

**TABLE 18**  
**Energy Value and Nutrient Content of Domestic Food Consumption**  
**(All Households)**

*per head per day*

		Jan.-Feb.	April-May	July-Aug.	Oct.-Nov.	Annual average	Oct.-Nov. as percentage of Jan.-Feb.
		Energy value ... Cal.	2,498	2,485	2,468	2,443	2,474
Total protein ... g.	78	78	77	77	78	99	
Animal protein ... g.	38	39	39	37	38	97	
Fat ... g.	102	102	101	100	101	98	
Calcium ... mg.	1,070	1,088	1,054	1,052	1,066	98	
Iron ... mg.	13.5	13.7	14.7	12.5	13.6	93	
Vitamin A (a) ... i.u.	3,392	3,268	3,823	3,662	3,536	108	
Vitamin B <sub>1</sub> ... mg.	1.55	1.56	1.56	1.39	1.51	90	
Riboflavin ... mg.	1.72	1.77	1.74	1.55	1.69	90	
Nicotinic acid ... mg.	13.2	12.7	13.0	13.0	13.0	98	
Vitamin C (a) ... mg.	71	54	116	96	84	133	
Vitamin D (a) ... i.u.	184	165	169	166	172	90	

(a) Includes vitamin welfare foods.

more closely. The slight decrease in energy value was caused by small continuous reductions in each of the constituents, protein, fat and carbohydrate and was not related to reductions in any one food or group of foods. This point is illustrated in Table 19 which shows the contribution of the different food groups to the calorie totals for each season of the year.

**TABLE 19**  
**Energy Value of Domestic Food Consumption 1950**

*per head per day*

	Jan.-Feb.		April-May		July-Aug.		Oct.-Nov.		Annual average	
	Cal.	% of total	Cal.	% of total	Cal.	% of total	Cal.	% of total	Cal.	% of total
	Bread and flour ...	671	26.8	684	27.5	672	27.2	658	26.9	672
Other cereal products ...	277	11.1	263	10.6	251	10.2	276	11.3	266	10.8
Fats ...	369	14.8	372	15.0	381	15.4	370	15.2	374	15.1
Sugar and preserves ...	220	8.8	221	8.9	233	9.4	213	8.7	222	9.0
Meat, rationed (including bacon)	212	8.5	208	8.4	202	8.2	192	7.9	203	8.2
Meat, other ...	99	4.0	92	3.7	103	4.2	111	4.5	101	4.1
Potatoes (including chips) ...	172	6.9	165	6.6	167	6.8	166	6.8	167	6.7
Other vegetables and fruit ...	83	3.3	69	2.8	72	2.9	83	3.4	77	3.1
Milk ...	272	10.9	279	11.2	267	10.8	266	10.9	271	11.0
Other foods ...	123	4.9	132	5.3	120	4.9	108	4.4	121	4.9
<b>Total ...</b>	<b>2,498</b>	<b>100.0</b>	<b>2,485</b>	<b>100.0</b>	<b>2,468</b>	<b>100.0</b>	<b>2,443</b>	<b>100.0</b>	<b>2,474</b>	<b>100.0</b>

57. The contribution made by different foods to the protein totals over the year are shown in Table 20. The only marked seasonal changes in this table are the increased contribution of protein from eggs during April and May compared with other months and the decreased contribution from meat and fish at that time. The relatively high contribution from meats in July and August when meat consumption had fallen was caused by the issue of canned corned meat. It will be noted that throughout the year about half the protein came from animal sources.

TABLE 20  
Protein content of Domestic Food Consumption 1950

*per head per day*

	Jan.-Feb.		April-May		July-Aug.		Oct.-Nov.		Annual average	
	g.	% of total	g.	% of total	g.	% of total	g.	% of total	g.	% of total
<b>ANIMAL PROTEIN</b>										
Milk ... ..	14	18.0	14	18.0	14	18.1	13	16.8	14	18.0
Cheese ... ..	2	2.6	3	3.8	2	2.6	2	2.6	2	2.6
		—20.6		—21.8		—20.7		—19.4		—20.6
Meats ... ..	16	20.5	15	19.2	17	22.1	17	22.1	16	20.5
Fish ... ..	3	3.8	3	3.8	3	3.9	3	3.9	3	3.8
Eggs ... ..	3	3.8	4	5.1	3	3.9	2	2.6	3	3.8
Total animal protein ... ..	38	48.7	39	49.9	39	50.6	37	48.0	38	48.7
<b>VEGETABLE PROTEIN</b>										
Bread and flour	23	29.5	24	30.8	23	29.9	23	29.9	23	29.5
Other cereal products ... ..	7	9.0	6	7.7	6	7.8	7	9.1	7	9.0
		—38.5		—38.5		—37.7		—39.0		—38.5
Potatoes and vegetables ... ..	7	9.0	7	9.0	7	9.1	7	9.1	7	9.0
Other foods ... ..	3	3.8	2	2.6	2	2.6	3	3.9	3	3.8
Total vegetable protein ... ..	40	51.3	39	50.1	38	49.4	40	52.0	40	51.3
Total protein ... ..	78	100.0	78	100.0	77	100.0	77	100.0	78	100.0

58. The seasonal changes in fat and calcium were slight and detailed tables giving the dietary sources of these nutrients are not included in this report.<sup>1</sup> It is of interest that, throughout the year, over half of the total calcium in the domestic diet came from milk and cheese, about a quarter from bread and flour and one-third from all cereal products. The slight increase in April and May was caused by the seasonal rise in the consumption of dairy products.

59. The reduction in the extraction rate of flour in August 1950 was responsible for most of the decreases in the totals for iron<sup>2</sup>, vitamin B<sub>1</sub> and riboflavin shown in Tables 21 and 22. For riboflavin, the increase in the consumption of dairy products and eggs in April and May was also important. The small loss of nicotinic acid resulting from the reduction of the extraction rate of flour was more than offset by the increased contribution from unrationed meats.

<sup>1</sup> Annual average figures are shown for calcium in Table 37, paragraph 88.

<sup>2</sup> The high level for July-August was the result of including canned corned beef in the ration at that time, and of increased vegetable consumption.

**TABLE 21**  
**Contribution of Iron from Foods in the Household Diet 1950**

*per head per day*

	Jan.-Feb.		April-May		July-Aug.		Oct.-Nov.		Annual average	
	mg.	% of total	mg.	% of total	mg.	% of total	mg.	% of total	mg.	% of total
Bread and flour ...	4.3	31.5	4.3	31.6	4.3	28.9	3.3	26.5	4.0	29.6
Other cereal products ...	1.6	12.3	1.6	11.7	1.5	10.4	1.6	12.7	1.6	11.7
		—43.8		—43.3		—39.3		—39.2		—41.3
Meat, rationed (including bacon) ...	1.7	12.9	1.8	13.0	2.6	17.9	1.8	14.4	2.0	14.7
Meat, other ...	1.2	8.9	1.2	8.7	1.2	7.9	1.4	11.1	1.2	9.0
		—21.8		—21.7		—25.8		—25.5		—23.7
Vegetables ...	2.1	15.6	2.1	15.4	2.6	17.9	2.2	17.5	2.3	16.6
Eggs ...	0.7	5.1	1.1	7.9	0.8	5.5	0.4	3.5	0.8	5.6
Other foods ...	1.9	13.7	1.6	11.7	1.7	11.5	1.8	14.3	1.7	12.8
<b>Total ...</b>	<b>13.5</b>	<b>100.0</b>	<b>13.7</b>	<b>100.0</b>	<b>14.7</b>	<b>100.0</b>	<b>12.5</b>	<b>100.0</b>	<b>13.6</b>	<b>100.0</b>

**TABLE 22**  
**Contribution of Vitamin B<sub>1</sub>, Riboflavin and Nicotinic Acid from Foods in the Household Diet 1950**

*per head per day*

	Jan.-Feb.		April-May		July-Aug.		Oct.-Nov.		Annual average	
	mg.	% of total	mg.	% of total	mg.	% of total	mg.	% of total	mg.	% of total
<b>VITAMIN B<sub>1</sub> (a) ...</b>										
Bread and flour	0.50	38.0	0.51	38.5	0.50	37.9	0.40	34.3	0.48	37.5
Other cereal products ...	0.09	6.8	0.08	6.3	0.07	5.5	0.08	6.9	0.08	6.3
		—44.8		—44.8		—43.4		—41.2		—43.8
Potatoes ...	0.21	16.4	0.21	16.0	0.22	16.5	0.21	17.6	0.21	16.4
Other vegetables	0.08	5.8	0.07	5.5	0.09	7.1	0.08	6.9	0.08	6.3
		—22.2		—21.5		—23.6		—24.5		—22.7
Meats ...	0.20	14.8	0.20	14.8	0.19	14.4	0.18	15.2	0.19	14.8
Milk ...	0.16	12.0	0.16	12.4	0.16	11.9	0.16	13.3	0.16	12.5
Other foods ...	0.08	6.2	0.09	6.5	0.09	6.7	0.07	5.8	0.08	6.2
<b>Total ...</b>	<b>1.32</b>	<b>100.0</b>	<b>1.32</b>	<b>100.0</b>	<b>1.32</b>	<b>100.0</b>	<b>1.18</b>	<b>100.0</b>	<b>1.28</b>	<b>100.0</b>
<b>RIBOFLAVIN</b>										
Milk ...	0.63	36.6	0.64	36.0	0.62	36.1	0.61	39.6	0.63	37.1
Cheese ...	0.05	3.0	0.05	2.9	0.05	2.9	0.05	3.3	0.05	2.9
		—39.6		—38.9		—39.0		—42.9		—40.0
Bread and flour	0.26	15.1	0.27	15.0	0.27	15.4	0.17	10.7	0.24	14.1
Other cereal products ...	0.07	4.1	0.06	3.6	0.05	3.6	0.05	3.1	0.06	3.5
		—19.2		—18.6		—19.0		—13.8		—17.6
Meats ...	0.28	16.2	0.27	14.9	0.28	16.2	0.28	18.1	0.28	16.5
Vegetables ...	0.16	9.3	0.16	8.9	0.16	9.0	0.16	10.6	0.16	9.4
Eggs ...	0.11	6.4	0.18	10.1	0.14	7.8	0.08	4.9	0.13	7.7
Other foods ...	0.16	9.3	0.14	8.6	0.16	9.0	0.15	9.7	0.15	8.8
<b>Total ...</b>	<b>1.72</b>	<b>100.0</b>	<b>1.77</b>	<b>100.0</b>	<b>1.74</b>	<b>100.0</b>	<b>1.55</b>	<b>100.0</b>	<b>1.70</b>	<b>100.0</b>

(a) To allow for cooking losses of vitamin B<sub>1</sub> 15 per cent has been deducted from all figures as suggested in Medical Research Council War Memorandum No. 14.



TABLE 22—continued

	Jan.-Feb.		April-May		July-Aug.		Oct.-Nov.		Annual average	
	mg.	% of total	mg.	% of total	mg.	% of total	mg.	% of total	mg.	% of total
<b>NICOTINIC ACID</b>										
Meat, rationed (including bacon)	3.1	23.6	3.1	24.5	3.2	24.6	3.0	22.9	3.1	23.9
Meat, other ...	1.5	11.4	1.3	10.1	1.2	9.3	1.7	13.0	1.4	10.9
		35.0		34.6		33.9		35.9		34.8
Bread and flour	3.4	26.1	3.5	27.5	3.5	26.6	3.2	24.9	3.4	26.2
Other cereal products ...	0.7	5.6	0.7	5.7	0.7	5.4	0.8	5.9	0.7	5.7
		31.7		33.2		32.0		30.8		31.9
Vegetables ...	2.6	19.3	2.5	19.3	2.8	21.7	2.6	19.8	2.6	20.1
Fish ...	0.6	4.2	0.4	3.5	0.5	3.6	0.5	4.2	0.5	3.9
Other foods ...	1.3	9.8	1.2	9.4	1.1	8.8	1.2	9.3	1.2	9.3
<b>Total ...</b>	<b>13.2</b>	<b>100.0</b>	<b>12.7</b>	<b>100.0</b>	<b>13.0</b>	<b>100.0</b>	<b>13.0</b>	<b>100.0</b>	<b>12.9</b>	<b>100.0</b>

60. The variations shown in Table 18 in the contents of vitamins A and C closely follow the normal seasonal pattern, which is illustrated in the two following tables. Table 23 reveals a number of seasonal trends. The variation in the vitamin A contribution from fats reflects the increased ration during the summer months of butter, which contains more vitamin A than margarine, and the higher vitamin A content of summer and autumn milk. Vitamin A in "other meats" depends on the amount of liver included in this group and this was at its maximum for 1950 in July and August. The highest vitamin A contribution from eggs was at the time of the spring flush in April and May. The Table also shows the effect of the seasonal variations in the contribution of  $\beta$  carotene from vegetables.<sup>1</sup> Almost all the  $\beta$  carotene in root vegetables is attributable to carrots but the  $\beta$  carotene content of carrots is not constant.

TABLE 23  
Vitamin A Content of Domestic Food Consumption 1950

per head per day

	Jan.-Feb.		April-May		July-Aug.		Oct.-Nov.		Annual average	
	i.u.	% of total	i.u.	% of total	i.u.	% of total	i.u.	% of total	i.u.	% of total
Root vegetables ...	741	21.8	190	5.8	354	9.3	878	24.0	542	15.3
Other vegetables...	136	4.0	234	7.2	262	6.9	135	3.7	191	5.4
		25.8		13.0		16.2		27.7		20.7
Fats ...	989	29.2	1,036	31.7	1,111	29.1	971	26.5	1,027	29.0
Milk ...	312	9.2	449	13.7	585	15.3	577	15.8	481	13.6
Cheese ...	136	4.0	135	4.1	131	3.4	135	3.7	134	3.8
		13.2		17.8		18.7		19.5		17.4
Meat, rationed (including bacon)	25	0.7	26	0.8	24	0.6	26	0.7	25	0.7
Meat, other ...	422	12.5	488	15.0	600	15.7	434	11.8	486	13.8
		13.2		15.8		16.3		12.5		14.5
Eggs ...	230	6.8	360	11.0	269	7.0	149	4.1	252	7.1
Other foods (a) ...	401	11.8	350	10.7	487	12.7	357	9.7	398	11.3
<b>Total ...</b>	<b>3,392</b>	<b>100.0</b>	<b>3,268</b>	<b>100.0</b>	<b>3,823</b>	<b>100.0</b>	<b>3,662</b>	<b>100.0</b>	<b>3,536</b>	<b>100.0</b>

(a) Includes welfare fish liver oil and vitamin A and D tablets.

<sup>1</sup> The method of calculation of  $\beta$  carotene content is described in the First Report, paragraph 140.

throughout the year. Old carrots contain about twice as much as new, and the greater contribution of vitamin A from root vegetables during the winter and autumn was partly the result of increased consumption of carrots during these months, and partly the result of the richer  $\beta$  carotene content of the carrots at that season.

61. The greatest seasonal variation in Table 24 is seen to occur in the contribution of vitamin C from potatoes. New potatoes are a good source of vitamin C and provided half the total vitamin C of the domestic food supply in July and August 1950. Owing to the loss of vitamin C in potatoes on storage their contribution dropped to a third of the total in October and November and to a quarter in the first half of the year. The contribution of vitamin C from fruit was as much as 30 to 40 per cent throughout the year, the supply from this source being at its lowest in April when total supply was also at a minimum.

**TABLE 24**  
**Vitamin C Content (a) of Domestic Food Consumption 1950**

*per head per day*

	Jan.-Feb.		April-May		July-Aug.		Oct.-Nov.		Annual average	
	mg.	% of total	mg.	% of total	mg.	% of total	mg.	% of total	mg.	% of total
Potatoes ... ..	10	24.1	8	26.0	35	49.8	19	37.1	18	37.2
Fruit (b) ... ..	17	40.2	10	32.6	22	32.0	15	29.6	16	33.0
Green vegetables	5	12.9	5	15.7	2	2.4	8	14.7	5	10.1
Other vegetables (c)	3	7.4	3	8.4	5	7.1	4	6.8	4	7.4
Other foods (d) ...	7	15.4	5	17.3	6	8.7	6	11.8	6	12.3
<b>Total ... ..</b>	<b>42</b>	<b>100.0</b>	<b>31</b>	<b>100.0</b>	<b>70</b>	<b>100.0</b>	<b>52</b>	<b>100.0</b>	<b>49</b>	<b>100.0</b>

(a) Allows for cooking losses on the basis of the estimates suggested in Medical Research Council Memorandum No. 14 (First Report paragraph 152).

(b) Includes tomatoes.

(c) Includes fresh peas and beans.

(d) Includes welfare orange juice.

62. The vitamin D content of the diet depends on the consumption of a small number of foods and, for this reason, fluctuates more irregularly from one season to another than other nutrients. In Table 25 the reasons for the

**TABLE 25**  
**Vitamin D Content of Domestic Food Consumption 1950**

*per head per day*

	Jan.-Feb.		April-May		July-Aug.		Oct.-Nov.		Annual average	
	i.u.	% of total	i.u.	% of total	i.u.	% of total	i.u.	% of total	i.u.	% of total
Margarine... ..	52	28.3	51	30.9	48	28.4	52	31.3	51	29.6
Other fats ... ..	10	5.4	11	6.7	13	7.7	10	6.0	11	6.4
		33.7		37.6		36.1		37.3		36.0
Fish ... ..	45	24.5	23	13.9	37	21.9	51	30.7	39	22.7
Eggs ... ..	14	7.6	22	13.3	16	9.5	9	5.4	15	8.7
Other foods (a) ...	63	34.2	58	35.2	55	32.5	44	26.6	56	32.4
<b>Total ... ..</b>	<b>184</b>	<b>100.0</b>	<b>165</b>	<b>100.0</b>	<b>169</b>	<b>100.0</b>	<b>166</b>	<b>100.0</b>	<b>172</b>	<b>100.0</b>

(a) Includes welfare fish liver oil and vitamin A and D tablets.

fluctuations during 1950 can be seen. The consumption of margarine, which has a higher content of vitamin D than butter, and fat fish were at their highest during the winter months, that of butter and eggs in the spring and summer, and that of fish liver oil in January and February.

## VI. THE HOUSEHOLD DIET OF SOCIAL CLASSES

63. One of the most valuable consequences of the new and expanded sample used in the National Food Survey during 1950 was the possibility afforded for a comparison between the diets of different social classes and of households with different composition. In the following paragraphs social class diets are described using the definitions discussed in Appendix A.

### Food Consumption and Expenditure : General

64. The consumption of selected foods by social class is set out in Table 26 and details of seasonal variations are given in the series of tables with which this section concludes. As a measure of class difference the range, or difference between the highest and lowest figures for each food (with each sub-class of class D treated separately<sup>1</sup>), is expressed as a percentage of the national average. In this fashion it is possible to provide a rough comparison with the pre-war class differences in the diets recorded by Crawford and Broadley. In

TABLE 26  
Domestic Consumption by Social Class of Selected Foods

*per head per week*

	A	B	C	D			National average	Range as percentage of average
				Excluding old age pensioner households	Old age pensioner households	All Class D households		
Liquid milk pt.	6.3	5.4	4.7	4.3	4.8	4.4	4.8	42
Shell eggs (hens') No.	4.2	3.9	3.4	3.1	3.0	3.1	3.4	35
Rationed fresh meat oz.	15.1	14.4	13.5	14.2	14.9	14.3	13.8	12
Fats								
Butter ... oz.	4.9	4.8	4.5	4.4	4.8	4.5	4.6	11
Margarine oz.	3.7	3.9	4.0	4.0	3.5	3.9	3.9	13
Cooking fats (a) oz.	2.9	3.3	3.1	3.0	2.9	3.0	3.1	13
Total fats oz.	11.5	12.0	11.6	11.4	11.2	11.4	11.6	7
Potatoes (b) oz.	52.7	59.7	66.7	63.3	50.7	60.8	64.2	25
Bread (c) ... oz.	43.0	46.7	57.7	57.0	53.1	56.2	55.5	26
Flour ... oz.	8.6	8.0	7.1	7.2	6.9	7.1	7.3	23

(a) Includes unrationed fats.

(b) Includes chips and crisps.

(c) Excludes fancy breads and sandwiches.

<sup>1</sup> The old age pensioner households have many of the attributes of a distinct social class.

this survey classes were defined on similar lines to those in the National Food Survey<sup>1</sup>. Comparable data are not available for the years immediately preceding 1950.<sup>2</sup>

65. Table 26 shows that in 1950 Classes A and B consumed substantially more milk and eggs than the other classes. Differences were small for rationed meat and fats, but Class C, with its larger families, consumed greater quantities of potatoes and bread. A number of foods could not be included in the table and for summary information on fresh vegetables in particular, it is necessary to use the expenditure records. These are tabulated in Table 27 and in the tables at the end of this section. In Table 27 it is seen that the range in expenditure for milk and eggs is less than in consumption, a result of the cheap milk schemes for the former and the large supply from "free" sources going to Class A for the latter. The wide range that existed in expenditure on fresh fruit and fresh green vegetables is the other outstanding feature of this table.

TABLE 27  
Domestic Expenditure by Social Class on Selected Foods

*d. per head per week*

	A	B	C	D			National average	Range as percentage of average
				Excluding old age pensioner households	Old age pensioner households	All Class D households		
Liquid milk ...	24.7	22.1	18.7	19.2	23.3	20.0	19.6	31
Shell eggs (hens) ...	8.0	10.1	9.2	9.0	7.7	8.7	9.2	26
Rationed fresh meat	21.6	20.3	19.2	19.7	20.4	19.8	19.5	12
Fats								
Butter ...	5.9	5.7	5.7	5.5	5.6	5.5	5.6	6
Margarine ...	2.3	2.2	2.4	2.4	2.1	2.3	2.4	12
Cooking fats (a)...	2.6	2.4	2.1	2.1	1.8	2.1	2.2	35
Total fats ...	10.8	10.3	10.2	10.0	9.5	9.9	10.2	13
Fresh green vegetables (b)...	7.2	5.5	4.2	4.2	3.6	4.0	4.4	82
Fresh fruit (c) ...	19.8	14.9	10.8	8.8	7.3	8.5	11.1	114
Potatoes (d) ...	5.4	6.9	8.3	7.8	5.4	7.4	7.8	37
Bread and flour (e)...	11.8	12.4	14.3	14.4	13.8	14.3	14.0	19

(a) Includes unrationed fats.

(b) Includes salads, fresh peas and beans.

(c) Includes tomatoes.

(d) Includes chips and crisps.

(e) Excludes fancy breads and sandwiches.

66. The difficulty which arises from the tendency of the housewife to draw upon larder stock during the survey week, and to reduce her usual level of purchases, is particularly relevant to social class expenditure since larder stock withdrawals are found to vary with social class. Moreover, supplies from "free" sources also show class variations. These, although important for individual foods, are of less account generally than larder stock contributions. Table 28 gives details of purchases, "free" food contributions and larder stock withdrawals by social class and by season.

<sup>1</sup> See Appendix C.

<sup>2</sup> But the Second Report of the National Food Survey Committee will give some information on the basis of a broader class comparison.

**TABLE 28**  
**Estimated Value of Household Food Consumption by Social Class 1950**

*per head per week*

	Jan.-Feb.	April-May	July-Aug.	Oct.-Nov.	Annual average
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
<b>CLASS A</b>					
a. Purchases ... ..	16 8	16 11	16 7	18 9	17 3
b. Free food ... ..	0 7	0 6	1 6	1 2	0 11
c. Larder stock withdrawals ...	4 7	2 11	1 7	3 7	3 2
<b>Total estimated value ...</b>	<b>21 10</b>	<b>20 4</b>	<b>19 8</b>	<b>23 6</b>	<b>21 4</b>
<b>CLASS B</b>					
a. Purchases ... ..	15 4	16 5	16 4	16 0	16 0
b. Free food ... ..	0 4	0 6	1 5	0 4	0 8
c. Larder stock withdrawals ...	3 1	1 4	1 3	1 9	1 10
<b>Total estimated value ...</b>	<b>18 9</b>	<b>18 3</b>	<b>19 0</b>	<b>18 1</b>	<b>18 6</b>
<b>CLASS C</b>					
a. Purchases ... ..	14 3	15 0	14 10	14 8	14 8
b. Free food ... ..	0 3	0 5	0 9	0 4	0 5
c. Larder stock withdrawals ...	1 6	0 11	0 9	1 1	1 1
<b>Total estimated value ...</b>	<b>16 0</b>	<b>16 4</b>	<b>16 4</b>	<b>16 1</b>	<b>16 2</b>
<b>CLASS D</b>					
<i>Excluding old age pensioner households</i>					
a. Purchases ... ..	13 9	14 11	14 4	13 10	14 3
b. Free food ... ..	0 1	0 3	0 7	0 3	0 3
c. Larder stock withdrawals ...	1 4	0 4	0 9	1 0	0 10
<b>Total estimated value ...</b>	<b>15 2</b>	<b>15 6</b>	<b>15 8</b>	<b>15 1</b>	<b>15 4</b>
<i>Old age pensioner households only</i>					
a. Purchases ... ..	12 3	14 0	13 2	13 1	13 2
b. Free food ... ..	0 1	0 2	0 8	0 3	0 4
c. Larder stock withdrawals ...	2 0	2 0	1 1	1 1	1 6
<b>Total estimated value ...</b>	<b>14 4</b>	<b>16 2</b>	<b>14 11</b>	<b>14 5</b>	<b>15 0</b>
<b>CLASS D</b>					
<i>All households</i>					
a. Purchases ... ..	13 6	14 9	14 0	13 9	14 0
b. Free food ... ..	0 1	0 3	0 7	0 3	0 4
c. Larder stock withdrawals ...	1 5	0 8	0 11	0 11	0 11
<b>Total ... ..</b>	<b>15 0</b>	<b>15 8</b>	<b>15 6</b>	<b>14 11</b>	<b>15 3</b>
<i>All households</i>					
a. Purchases ... ..	14 4	15 2	14 11	14 9	14 10
b. Free food ... ..	0 4	0 5	0 10	0 4	0 6
c. Larder stock withdrawals ...	1 8	0 10	1 0	1 3	1 2
<b>Total ... ..</b>	<b>16 4</b>	<b>16 5</b>	<b>16 9</b>	<b>16 4</b>	<b>16 6</b>

67. It is seen from the Table that Class A received the largest contribution from "free" sources; part reason for this is the large proportion of rural households found in this class.<sup>1</sup> The following summary shows that, as is to be expected from the large stocks kept by Class A and the more varied diet in these households, the class range is much wider when stock withdrawals are

<sup>1</sup> See above paragraph 17.

taken into consideration. The contribution of "free" food makes little additional difference to the range :

	Average	Class range	Class range as percentage of average
	<i>s. d.</i>	<i>s. d.</i>	%
Recorded purchases ... ..	14 10	3 3	22
Corrected for larder stock withdrawals	16 0	5 6	34
Including "free" food ... ..	16 6	6 1	37

68. For the whole year, the value of consumption by Class A was 21*s. 4d.* compared with 15*s. 3d.* for Class D, including the old age pensioner households, a difference of 6*s. 1d.*<sup>1</sup> (Table 28). The seasonal variation at these levels has been summarised and the figures show that the Class A purchases varied more widely from season to season than those of Class D, that the difference was even more marked when larder stock withdrawals and "free" food are taken into account, and that the widest range for Class A was between the autumn (the highest) and the summer, that for Class D between the spring (the highest) and the autumn.

	Average 1950	Seasonal range	Seasonal range as percentage of average
	<i>s. d.</i>	(Autumn to Summer) <i>s. d.</i>	%
<b>CLASS A</b>			
Recorded purchases ... ..	17 3	2 2	13
Corrected for larder stock withdrawals ... ..	20 5	4 2	20
Including "free" food ... ..	21 4	3 10	18
<b>CLASS D</b>		(Spring to Autumn)	
Recorded purchases ... ..	14 0	1 3	9
Corrected for larder stock withdrawals ... ..	14 11	0 9	5
Including "free" food ... ..	15 3	0 9	5

69. It is evident that the practice of holding substantial larder stocks by families in higher social classes makes their purchases recorded in the Survey week less representative of their normal practice than with families in other classes and this has to be kept in mind when discussing food expenditure by different social classes. In particular, the high level of stock withdrawals by Class A during the winter months has to be noted. The value of consumption for the whole sample remained almost constant from one season to another but it fell in the spring for Classes A and B and increased for the other classes, the increase being particularly marked with the old age pensioner households. The increase in "free" food in the summer was associated with larder stock withdrawals below the winter level in all classes. These changes reflected the high cost of the new season's supplies coming on to the market and the movement away from the yet higher cost of a varied diet in the winter which Classes A and B had the means to purchase, or from the relatively cheap restricted diet to which the poorer classes had access. The value of the diet of Class A continued to fall in the summer while that of other classes remained constant

<sup>1</sup> Or 6*s. 4d.* if old age pensioners are treated as a separate class.

or also fell. By October and November the winter position was foreshadowed as the value of Class A diet rose substantially.

70. Comparison with total food expenditure by social class recorded by Crawford and Broadley before the war can only be approximate. Changes in eating out habits brought about by the war cannot be taken into account since the information refers to household expenditure only and there is also the problem of the varying effects of larder stock withdrawals on the 1950 estimates. The Crawford and Broadley budgets were collected mainly during the winter months ; on the other hand, the comparison made below, which uses the results for January–February 1950 combined with those for October–November 1950, is biased by any long-term trend in food consumption habits during 1950. Nevertheless, the broad conclusion presented by the following figures is clear :

	1936–1937	1950
Average food expenditure ... ..	8s. 11½d.	14s. 6½d.
Class range ... ..	10s. 10d.	4s. 1d.
Range as percentage of average <sup>1</sup> ... ..	121%	28%

71. This substantial reduction in social class differences was achieved largely by the levelling up of expenditure on the part of the lower class. All classes spent more in 1950 on fresh milk, margarine and fresh fruit and slightly more on potatoes, bread and flour. On some foods Class D in 1950 spent more than before the war and Class A probably less. These foods included eggs, butter, fresh meat and fresh vegetables. As would be expected, the levelling of expenditure was most marked with rationed foods ; in particular, expenditure on eggs, butter and fresh meat showed very little class difference in 1950 in contrast with the position before the war when Class A spent three times as much as Class D on these items. But this type of change was not confined to the rationed foods ; the class differences in fresh milk expenditure showed the same trend and although such differences were still appreciable in the 1950 expenditure on fresh vegetables and fruit, they were certainly smaller than before the war.

### Consumption and Expenditure : Selected Foods<sup>2</sup>

#### Liquid Milk

72. The average range in consumption was 2·0 pints per head per week, or 42 per cent of the average for all classes of 4·8 pints, compared with 31 per cent for expenditure (Class A and Class C). This narrower range of expenditure, despite the larger quantities of the cheap welfare and school milk consumed by the poorer classes with large families, is explained by the contribution from “ free ” sources for Class A. Before the war, the range in consumption was 3·5 pints, or 120 per cent of the average of 2·9 pints, but these figures refer to winter consumption only and exclude the small quantity of school milk drunk at that time ; the expenditure range, at 12·3d. was also 120 per cent of the average of 10·2d.

#### Shell Eggs

73. The effect of “ free ” supplies on egg consumption is seen from the comparison between consumption and expenditure. All classes shared in the high level of consumption in the spring and early summer, but the winter consumption of Class D showed a more than proportionate fall from the summer level. Over the year the class range in consumption was 1·2 eggs per head per week or 35 per cent of the average of 3·4 with Class A recording the highest

<sup>1</sup> Larder stock withdrawals may have been larger in 1950 and this would affect the comparison. On the extreme assumption that such withdrawals were nil in 1936–1937, the range would still be 121 per cent of the average compared with a figure for 1950, adjusted for larder stocks, of 44 per cent.

<sup>2</sup> See Tables, 29 to 32 at end of this section.

level, although this class also recorded the lowest average expenditure with the exception of old age pensioner households. Before the war, in the winter months, classes AA and A consumed 3.7 eggs more than Class D, or 90 per cent of the average of 4.1. The widest class range in expenditure in 1950, between Class B and old age pensioner households, was 2.4*d.* or 26 per cent of the average of 9.3*d.* During the flush period the range was wider. These differences may be compared with a range of 7.2*d.* during the winter months of 1936 to 1937, or 113 per cent of an average of 6.4*d.* Before the war, Class A spent the largest amount per head.

#### *Rationed Fresh Meat*

74. The range of consumption was small, 12 per cent of the average of 13.8 oz. Similarly, the range in expenditure was 12 per cent of an average of 19.5*d.* Before the war, with an average weekly consumption of these meats of 21.2 oz. per head the range between the highest and lowest class was 9.2 oz. or 49 per cent of the average. The range in expenditure was then much wider, 15.3*d.* or 112 per cent of the average of 13.6*d.* There was little change during 1950 in expenditure by different social classes, for the substantial cuts in the ration did not occur until December.

#### *Fats*

75. Total fats consumption, with an annual average of 11.6 oz. per head per week, was closely similar at all seasons in 1950 and with the exception of Class B (12.0 oz.) for all classes. Before the war an average of 12.6 oz. was recorded with a class range of 6.2 oz. or 50 per cent of the average. Consumption of butter followed the ration closely but there was, for the whole year, a small class difference of 0.5 oz. or 11 per cent of the average of 4.6 oz. and the old age pensioner group maintained a high level of consumption. The average before the war was 7.6 oz. and the class range 6.9 oz. or 91 per cent of the average. The class range for margarine consumption was lowest during the summer of 1950 when Class A, with the increased butter ration, reduced its consumption to a level well below that of all other classes. For the year as a whole, Class D, other than old age pensioner households, consumed 0.3 oz. more margarine than Class A, or 8 per cent of the average of 3.9. Before the war, the range amounted to as much as 2.1 or 87 per cent of the average, 2.4. Apart from the low consumption by the old age pensioner households, the class differences in the consumption of cooking fat of the rationed varieties were small, both before the war and in 1950. There was a tendency for Class A to consume more before the war and for Class D to consume more in 1950.

76. Over the year as a whole, the class differences in butter expenditure were slight compared with before the war when the range was 6.7*d.* or 103 per cent of the average of 6.5*d.*, expenditure by Class A having fallen since then by nearly one half. The range in margarine expenditure was also small in 1950. Before the war the lower group spent more than twice as much as the upper group but all groups have increased their expenditure since that time. Taking all fats together the range between Classes A and D (excluding the old age pensioner households)<sup>1</sup> in 1950 was 0.8*d.* or 9 per cent of the average of 10.2*d.* and this may be compared with the 1936-1937 range of 7.1*d.* or 83 per cent of the average of 8.6*d.*

#### *Fresh Green Vegetables*

77. Expenditure on fresh green vegetables by Classes A and B varied considerably from one season to another but for the other classes it was more stable at a much lower level, except during the spring when these foods appeared

<sup>1</sup> Old age pensioner households consumed even less, giving a range of 13 per cent.



to be attractive in spite of high prices. Over the year, class A spent three-quarters as much again as class D, excluding the old age pensioner households,<sup>1</sup> but the difference amounted only to 3d. per head per week. The comparison with the position before the war is obscured by the inclusion of root vegetables and processed vegetables in the 1936-1937 figures and the fact that these types are consumed in larger quantities during the winter months. A better comparison can be made with the social class expenditure on all vegetables, other than potatoes, recorded for January and February 1950. This shows a range of 7.5d. per head per week or 68 per cent of the average 11.1d. The figures for 1936-1937 were 7.0d. and 3.8d. giving a percentage of 185. In view of the increase in prices that has taken place since before the war, it is possible that the present consumption of vegetables by all classes, except perhaps class D, has fallen. The estimate of supplies moving into civilian consumption<sup>2</sup> indicates a general reduction compared with before the war of about 4 per cent.

#### *Fresh Fruit*

78. The seasonal changes in expenditure on fresh fruit were broadly similar for all social classes except that the expenditure by Class D increased in the spring at a time when expenditure generally was falling. For all classes the peak expenditure recorded by the survey occurred in the summer. On the average through the year, the range between Classes A and D (excluding the old age pensioner households) was 10.8d. per head per week or 97 per cent of the average for all classes 11.1d. Expenditure by the old age pensioner group was particularly low at all seasons. Expenditure before the war showed a range of 12.4d. which amounted to 238 per cent of the average figure of 5.2d. As with vegetables, there appears to have been an increase in the expenditure by the lower classes rather than a general improvement in the national diet, and the estimate of supplies of all fruit suggests a fall of over 10 per cent.<sup>3</sup>

#### *Potatoes*

79. The average consumption of potatoes in 1950 (64.2 oz per head per week) was about the same as that recorded by Crawford and Broadley (62.6 oz.), although there is a small difference if the winter months in 1950 only are considered (67 oz.). In 1950 Class A (52.7 oz.) and the old age pensioner group (50.5 oz.) recorded the lowest consumption levels and Class C the highest; the range between Classes A and C was 14 oz. or 22 per cent of the average. Before the war the second highest class (Class B) was the largest consumer with 67.1 oz. and the remaining classes, including Classes AA and A consumed about 60 oz. The range was as small as 5.5 oz. or 9 per cent of the average. The pre-war figures exclude chips and crisps but these items do not add much to the bulk of consumption. All classes in 1950 showed a similar seasonal variation in their potato consumption with the lowest levels recorded for the summer months, the period of the year when potato expenditure was highest. Class D, with the exception of the old age pensioner households, spent half as much again as Class A but Classes A and B had access to larger supplies from "free" sources. All classes shared in the seasonal rise in expenditure. In the winter months Class D spent 7.4d. against 4.3d. for Class A, with an average for all households of 7.4d. Before the war, the Crawford and Broadley records for the winter months showed an average expenditure of 4.2d. with Classes AA and A spending 4.7d. and Class D 3.9d.

#### *Bread and Flour*

80. The consumption of bread showed small seasonal variations, the chief being the marked fall in consumption by Class A in the summer similar to the

<sup>1</sup> Which spent less than other households in Class D.

<sup>2</sup> Ministry of Food Bulletin No. 632, January 5th 1952, page 4.

<sup>3</sup> *Ibid.*

fall in potato consumption for this class. Class differences generally over the year were similar to those found with potatoes except that consumption by old age pensioners was relatively high. In part, these differences, and those recorded for potatoes, were the result of economic conditions since these foods are both cheap and bulky ; but, as described in the following section, they also reflect the family composition. Over the year, flour consumption was highest in Class A and lowest in old age pensioner households. In all classes the peak consumption was in the summer, but Class A also registered a high level of consumption in January and February. Class range in expenditure on bread and flour which varied little seasonally, was small with an average expenditure of 14·0d. per head per week. Before the war there was also little class difference with an average expenditure of 10·2d.

**TABLE 29**  
**Domestic Consumption and Expenditure by Social Class 1950**  
*Liquid Milk, Shell Eggs and Rationed Fresh Meat*  
*per head per week*

	Jan.- Feb.	April- May	July- Aug.	Oct.- Nov.	Annual aver- age	Jan.- Feb.	April- May	July- Aug.	Oct.- Nov.	Annual aver- age
	pt.	pt.	pt.	pt.	pt.	d.	d.	d.	d.	d.
<b>LIQUID MILK</b>										
Class A ... ..	6·2	6·0	6·4	6·5	6·3	24·1	25·5	24·9	24·2	24·7
Class B ... ..	5·6	5·4	5·3	5·1	5·4	23·8	22·0	21·4	21·2	22·1
Class C ... ..	4·7	4·9	4·6	4·7	4·7	18·5	19·1	18·6	18·6	18·7
Class D										
Old age pensioner households ...	4·7	5·0	4·9	4·5	4·8	23·2	23·4	24·3	22·5	23·3
Other households	4·2	4·4	4·5	4·2	4·3	19·0	19·3	20·3	18·5	19·2
Total Class D	4·3	4·5	4·6	4·2	4·4	19·6	20·1	21·1	19·3	20·0
All classes... ..	4·8	4·9	4·8	4·7	4·8	19·6	19·8	19·6	19·3	19·6
<b>SHELL EGGS (HENS')</b>										
	No.	No.	No.	No.	No.					
Class A ... ..	3·9	5·3	4·4	3·1	4·2	6·3	12·0	8·1	5·7	8·0
Class B ... ..	3·6	5·5	4·1	2·3	3·9	8·7	14·8	10·5	6·4	10·1
Class C ... ..	3·0	4·9	3·7	2·0	3·4	8·7	13·0	9·2	5·9	9·2
Class D										
Old age pensioner households ...	2·6	4·7	3·0	1·5	3·0	8·1	11·6	6·3	4·8	7·7
Other households	2·8	4·7	3·3	1·7	3·1	8·7	12·8	9·0	5·3	9·0
Total Class D	2·8	4·7	3·2	1·7	3·1	8·6	12·6	8·4	5·2	8·7
All classes... ..	3·1	4·9	3·7	2·0	3·4	8·7	13·1	9·2	5·8	9·2
<b>RATIONED FRESH MEAT</b>										
	oz.	oz.	oz.	oz.	oz.					
Class A ... ..	14·9	15·4	14·4	15·6	15·1	20·6	21·2	22·6	22·1	21·6
Class B ... ..	14·6	14·7	13·9	14·4	14·4	19·2	20·5	20·4	21·1	20·3
Class C ... ..	13·9	13·5	12·6	13·9	13·5	19·3	19·4	18·2	19·8	19·2
Class D										
Old age pensioner households ...	16·1	14·7	13·3	15·7	14·9	21·5	20·0	19·5	20·5	20·4
Other households	14·0	14·8	13·7	13·8	14·1	19·5	20·7	18·8	19·4	19·7
Total Class D	14·4	14·8	13·6	14·2	14·3	19·9	20·6	19·0	19·6	19·8
All classes... ..	14·1	14·0	13·0	14·1	13·8	19·4	19·8	18·8	20·0	19·5
Approximate value of the ration ...	—	—	—	—	—	18·0	18·0	16·5	18·0	17·5

**TABLE 30**  
**Domestic Consumption and Expenditure by Social Class 1950**

*Fats*

*per head per week*

	Jan.- Feb.	April- May	July- Aug.	Oct.- Nov.	Annual aver- age	Jan.- Feb.	April- May	July- Aug.	Oct.- Nov.	Annual aver- age
	oz.	oz.	oz.	oz.	oz.	d.	d.	d.	d.	d.
<b>BUTTER</b>										
Class A ... ..	4.3	4.8	5.7	4.7	4.9	4.6	5.7	7.2	6.1	5.9
Class B ... ..	4.7	4.8	5.5	4.2	4.8	4.5	5.7	7.0	5.8	5.7
Class C ... ..	4.2	4.6	5.1	4.2	4.5	4.5	5.6	6.6	6.0	5.7
Class D										
Old age pensioner households ...	4.7	4.7	5.2	4.4	4.8	4.2	5.6	6.6	5.8	5.6
Other households	4.3	4.5	4.9	4.1	4.4	4.4	5.6	6.2	5.8	5.6
Total Class D	4.4	4.5	5.0	4.1	4.5	4.4	5.6	6.3	5.8	5.5
All classes... ..	4.3	4.6	5.2	4.2	4.6	4.5	5.6	6.6	5.9	5.6
<b>MARGARINE</b>										
Class A ... ..	4.2	3.5	2.8	4.3	3.7	2.5	2.2	2.2	2.2	2.3
Class B ... ..	4.2	3.8	3.7	3.9	3.9	2.1	2.2	2.2	2.3	2.2
Class C ... ..	4.1	4.0	3.8	4.0	4.0	2.4	2.4	2.3	2.4	2.4
Class D										
Old age pensioner households ...	3.4	3.5	3.3	3.8	3.5	2.1	2.3	1.9	2.3	2.2
Other households	3.8	4.0	4.1	4.2	4.0	2.3	2.4	2.4	2.4	2.4
Total Class D	3.7	3.9	3.9	4.1	3.9	2.3	2.4	2.3	2.4	2.3
All classes... ..	4.0	3.9	3.8	4.0	3.9	2.4	2.4	2.3	2.4	2.3
<b>COOKING FAT</b> <b>(RATIONED)</b>										
Class A ... ..	1.7	1.9	1.8	1.9	1.8	1.2	1.3	1.4	1.2	1.2
Class B ... ..	1.9	1.8	2.0	1.7	1.8	1.4	1.4	1.4	1.4	1.4
Class C ... ..	2.0	2.0	2.0	2.0	2.0	1.5	1.5	1.4	1.4	1.4
Class D										
Old age pensioner households ...	2.1	1.4	1.6	1.7	1.7	1.2	1.3	1.1	1.4	1.2
Other households	2.0	1.9	2.0	1.8	1.9	1.4	1.4	1.4	1.5	1.4
Total Class D	2.0	1.8	1.9	1.8	1.9	1.4	1.4	1.3	1.5	1.4
All classes... ..	2.0	2.0	2.0	1.9	2.0	1.5	1.4	1.4	1.4	1.4
<b>ALL FATS (a)</b>										
Class A ... ..	12.0	11.4	10.7	11.9	11.5	12.7	9.7	10.9	9.7	10.8
Class B ... ..	12.2	11.8	12.4	11.5	12.0	8.9	10.2	11.2	10.7	10.3
Class C ... ..	11.4	11.6	11.9	11.5	11.6	9.2	10.1	10.8	10.9	10.2
Class D										
Old age pensioner households ...	11.4	10.7	11.1	11.5	11.2	7.9	9.5	10.2	10.5	9.5
Other households	11.2	11.6	11.9	11.1	11.4	9.1	10.2	10.2	10.5	10.0
Total Class D	11.2	11.4	11.7	11.2	11.4	8.9	10.1	10.2	10.5	9.9
All classes... ..	11.5	11.6	11.9	11.5	11.6	9.2	10.1	10.7	10.7	10.2

(a) Includes unrationed cooking fats.

**TABLE 31**  
**Domestic Consumption and Expenditure by Social Class 1950**

*Potatoes, Bread and Flour*

*per head per week*

	Jan.- Feb.	April- May	July- Aug.	Oct.- Nov.	Annual aver- age	Jan.- Feb.	April- May	July- Aug.	Oct.- Nov.	Annual aver- age
	oz.	oz.	oz.	oz.	oz.	d.	d.	d.	d.	d.
<b>POTATOES (a)</b>										
Class A ... ..	64.1	51.5	43.6	51.9	52.7	4.3	6.9	5.9	4.4	5.4
Class B ... ..	59.6	62.2	54.8	62.2	59.7	6.3	8.5	6.7	6.3	6.9
Class C ... ..	72.4	69.0	57.7	67.8	66.7	8.0	9.7	8.4	7.0	8.3
Class D										
Old age pensioner households ...	53.0	52.9	43.2	53.6	50.7	5.0	7.1	5.0	4.8	5.5
Other households	65.9	64.3	57.1	65.8	63.3	7.5	8.8	8.1	6.9	7.9
Total Class D	63.3	62.0	54.3	63.4	60.8	7.0	8.5	7.5	6.5	7.4
All classes... ..	68.7	66.3	56.3	65.4	64.2	7.4	9.2	7.9	6.7	7.8
<b>BREAD (b)</b>										
Class A ... ..	44.2	44.9	38.5	44.3	43.0	9.1	10.2	8.9	11.1	9.8
Class B ... ..	46.1	45.8	47.6	47.4	46.7	10.4	10.4	10.4	10.7	10.5
Class C ... ..	57.8	58.9	57.2	56.7	57.7	12.5	12.7	12.4	12.4	12.5
Class D										
Old age pensioner households ...	51.1	55.5	52.4	53.5	53.1	11.1	12.4	11.5	12.1	11.8
Other households	57.0	59.3	54.7	56.8	56.9	12.7	13.0	11.8	12.3	12.4
Total Class D	55.8	58.6	54.3	56.1	56.2	12.4	12.9	11.7	12.3	12.3
All classes... ..	55.6	56.8	54.9	54.9	55.5	12.1	12.4	11.9	12.1	12.1
<b>FLOUR</b>										
Class A ... ..	10.0	8.3	10.3	6.0	8.6	3.8	1.4	1.5	1.2	2.0
Class B ... ..	8.1	7.3	9.1	7.6	8.0	1.9	1.8	2.1	1.7	1.9
Class C ... ..	7.0	8.2	7.4	6.7	7.1	1.9	1.8	1.9	1.7	1.8
Class D										
Old age pensioner households ...	7.3	5.7	7.6	6.9	6.9	1.9	1.8	2.7	1.8	2.0
Other households	6.8	6.7	8.0	7.0	7.2	1.8	1.8	2.3	2.1	2.0
Total Class D	6.9	6.5	7.9	7.0	7.1	1.8	1.8	2.4	2.0	2.0
All classes... ..	7.2	7.1	7.8	6.9	7.3	1.9	1.8	2.0	1.8	1.9

(a) Includes chips and crisps.

(b) Excludes fancy breads and sandwiches.

TABLE 32

## Domestic Expenditure by Social Class on Fresh Green Vegetables and Fresh Fruit

*d. per head per week*

	Jan.-Feb.	April-May	July-Aug.	Oct.-Nov.	Annual average
<b>FRESH GREEN VEGETABLES (a)</b>					
Class A ... ..	8·9	9·1	4·1	6·9	7·2
Class B ... ..	6·7	7·3	4·8	3·2	5·5
Class C ... ..	4·1	5·1	4·5	3·2	4·2
Class D:					
Old age pensioner households ... ..	3·2	4·9	3·4	2·9	3·6
Other households ... ..	3·7	5·5	5·0	2·4	4·2
Total Class D ... ..	3·6	5·4	4·6	2·5	4·0
All classes ... ..	4·4	5·6	4·5	3·2	4·4
<b>FRESH FRUIT (b)</b>					
Class A ... ..	18·3	15·8	23·6	21·6	19·8
Class B ... ..	13·0	12·7	20·3	13·6	14·9
Class C ... ..	9·4	7·9	15·1	10·7	10·8
Class D:					
Old age pensioner households ... ..	5·2	5·3	11·2	7·3	7·3
Other households ... ..	7·3	8·5	11·9	8·2	9·0
Total Class D ... ..	6·9	7·9	11·7	8·0	8·6
All classes ... ..	9·6	8·7	15·4	10·8	11·1

(a) Includes salads, fresh peas and beans.

(b) Includes tomatoes.

**Expenditure on Subsidised Foods**

81. Table 33 gives details of the expenditure by social class on the main subsidised foods<sup>1</sup> in 1950. It is seen that this expenditure accounted for a smaller proportion of total domestic food expenditure the higher the social class, but the cash benefit represented by the subsidy followed a less regular trend. Social class differences were broadly the same at each season of the year. The highest benefit recorded over the year was for Classes B and C in April-May and the lowest for Class D (including the old age pensioner households) in October-November. But these classes had respectively the largest and smallest average size of household and that this was a major cause of the class differences is shown in detail in the following section.

82. The group of old age pensioner households is of special interest. With an average size of 1·64 persons, these households contained very few children and obtained little benefit from the cheap milk scheme. In each season the cash value of the subsidy was low for this type of household:—

<i>Jan.-Feb.</i>	<i>April-May</i>	<i>July-Aug.</i>	<i>Oct.-Nov.</i>
<i>2s. 8d.</i>	<i>2s. 9d.</i>	<i>2s. 6d.</i>	<i>2s. 4d.</i>

with an annual average of *2s. 7d.* or the same as that for Class D as a whole. In July and August the subsidy represented 19 per cent of all their domestic expenditure on food.

<sup>1</sup> In 1950 these included principally butter, margarine, rationed cooking fat, sugar, tea, bacon, liquid milk (including cheap, free and school milk), shell eggs, rationed cheese, flour, bread (excluding fruit bread), potatoes and rationed fresh meat. The small items excluded do not represent more than *1d.* a head a week for any group of households. The total subsidy cost during the financial year ending April 1951 was £414 m.

**TABLE 33**  
**Expenditure on the main Subsidised Foods by Social Class :**  
**Annual Average 1950**

*per head per week*

	Social Class				All Households
	A	B	C	D	
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Expenditure					
(a) On main subsidised foods ...	8 2	8 3	8 1	8 2	8 1
(b) On other foods ...	9 1	7 9	6 7	5 10	6 9
(c) Total ...	17 3	16 0	14 8	14 0	14 10
(d) (a) as percentage of (c) ...	47%	52%	55%	58%	54%
Cash value of subsidy ...	2 9	2 11	2 11	2 7	2 10
As percentage of (a) ...	34%	35%	36%	32%	35%
As percentage of (c) ...	16%	18%	20%	18%	19%
Average size of household ...	3.43	3.57	3.88	2.68	3.51

**Energy Value and Nutrient Content of the Diet**

83. The calculation of the energy value and nutrient content of the diet has been described in the First Report<sup>1</sup> in connection with the urban working-class household. Similar methods have been applied to the diet of households in all social classes and the results are set out in Table 34. The class range is found to be highest for vitamins A and C and quite important for calcium and iron. These differences are not wholly attributable to differences in food

**TABLE 34**  
**Energy Value and Nutrient Content of Domestic Food Consumption 1950 by Social Class**

*per head per day*

	Social Class						All households
	A	B	C	D			
				Excluding old age pensioner households	Old age pensioner households	All Class D households	
Energy value ...	2,542	2,498	2,496	2,401	2,290	2,379	2,474
Total protein ...	82	78	78	76	72	75	78
Animal protein ...	45	40	38	36	36	36	38
Fat ...	109	106	101	97	96	97	101
Calcium ...	1,173	1,097	1,075	1,003	1,005	1,003	1,066
Iron ...	14.6	13.9	13.7	13.3	11.7	13.0	13.6
Vitamin A (a) ...	4,252	3,913	3,544	3,188	3,055	3,160	3,536
Vitamin B <sub>1</sub> (b) ...	1.52	1.50	1.54	1.46	1.38	1.45	1.51
Riboflavin ...	1.93	1.77	1.70	1.60	1.59	1.60	1.69
Nicotinic acid ...	13.8	13.2	13.0	12.9	12.0	12.7	13.0
Vitamin C (a) (b) ...	101	94	85	78	69	76	84
Vitamin D (a) ...	185	187	176	147	128	143	172

(a) Includes vitamin welfare foods.  
 (b) No allowance for cooking losses.

<sup>1</sup> Paragraph 117.

expenditure since variations in family composition affect the total and it is known that for example Class A households have fewer children. Moreover, differences in food habits, such as the practice of those in Classes A and B to consume more meals outside the home, must also be taken into account. This practice is considered again in the section dealing with the adequacy of the diet.<sup>1</sup>

84. Class differences were also measured in the enquiries by Orr and Crawford and Broadley before the war but it is not possible to draw a satisfactory comparison beyond that of the range shown by the diets recorded in 1950 and that recorded by Crawford and Broadley in 1936–1937. When this range for each nutrient is expressed as a percentage of the average, as in the following figures, the considerable decrease in class differences is evident. The changes that have occurred for vitamin B<sub>1</sub> and vitamin C are particularly noteworthy. In 1936–1937 and in 1950 the highest percentage was recorded for vitamin C.

	1936-7	1950 <sup>2</sup>
	%	%
Calories ... ..	40	11
Protein ... ..	44	13
Calcium ... ..	88	20
Iron ... ..	47	18
Vitamin A ... ..	81	34
Vitamin B <sub>1</sub> ... ..	71	9
Vitamin C ... ..	113	42

#### Food Sources of Different Nutrients

85. The following tables (35 to 44) detail for each social class the food sources of the different nutrients. The figures may be compared with the averages for the whole sample which are set out in Section V.

86. Table 35 deals with the energy value of the diet. During 1950 the proportion of total calories derived from bread and flour and potatoes was lowest, and that from other cereal products, milk, fruit and vegetables (other than potatoes), and sugar and preserves was highest in Class A. The contribution from fats and meats was fairly constant for all classes. Old age pensioner households recorded a different pattern from other households in Class D. They obtained larger proportions of the total energy value of their food from fats, milk, sugar and preserves and smaller proportions from bread and flour, potatoes and other vegetables.

87. The contributions of various foods to the total protein consumption of the different social classes are given in Table 36. Class A obtained nearly 55 per cent of its protein from animal sources, compared with just under 50 per cent in Classes C and D. All classes obtained above 20 per cent from meats. Cereals provided from 33 to 39 per cent of total protein supplies, potatoes and other vegetables from 9 to 10 per cent (with the exception of Class A), fish and eggs each 4 to 5 per cent and cheese 3 to 4 per cent. Class A depended upon milk for 21 per cent of its supply, as compared with 17 per cent for Class D, and obtained 23 per cent from bread and flour as compared with 31 per cent in Class D. In contrast with other households in Class D and also those in Class C, old age pensioner households received a larger proportion of their protein from milk and cheese.

<sup>1</sup> Paragraphs 96 *et seq.*

<sup>2</sup> The average of the first and fourth quarters has been used since these quarters more nearly correspond with the period of the Crawford and Broadley Survey.

**TABLE 35**  
**Energy Value of Domestic Food Consumption 1950 by Social Class**  
*per head per day*

	Social Class													
	A			B			C			D				
	Cal.	% of total		Cal.	% of total		Cal.	% of total		Cal.	% of total			
Bread and flour (a) ...	559	22.0		590	23.6		691	27.7		686	28.6		677	28.4
Other cereal products	330	13.0		301	12.1		265	10.6		242	10.1		239	10.1
Fats ...	369	—	35.0	385	—	35.7	374	—	38.3	365	—	38.7	364	—
Meat, rationed (including bacon) ...	222	8.8	14.5	211	8.4	15.4	201	8.0	15.0	204	8.5	213	206	8.6
Meat, other ...	112	4.4		97	3.9		103	4.2		101	4.2		97	4.1
Milk ...	335	—	13.2	295	—	12.3	271	—	12.2	244	—	12.7	247	—
Potatoes (including chips)	133	5.2	13.2	151	6.0	11.9	175	7.0	10.8	167	7.0		159	6.7
Other vegetables and fruit ...	105	4.1		96	3.8		75	3.0		70	2.9		67	2.8
Sugar and preserves ...	244	—	9.3	240	—	9.8	221	—	10.0	210	—	9.9	211	—
Other foods ...	133	—	5.2	132	—	5.3	120	—	4.8	112	—	4.7	112	—
<b>Total ...</b>	<b>2,542</b>	<b>100.0</b>		<b>2,498</b>	<b>100.0</b>		<b>2,496</b>	<b>100.0</b>		<b>2,401</b>	<b>100.0</b>		<b>2,379</b>	<b>100.0</b>

(a) Bread includes rolls, breadcrumbs, currant and malt bread, muffins and crumpets.



**TABLE 36**  
**Protein Content of Domestic Food Consumption 1950 by Social Class**  
*per head per day*

	Social Class											
	A		B		C		Excluding old age pensioner households		Old age pensioner households		All Class D households	
	g.	% of total	g.	% of total	g.	% of total	g.	% of total	g.	% of total	g.	% of total
<b>ANIMAL PROTEIN</b>												
Milk	17	20.7	15	19.2	14	17.9	13	17.1	13	18.0	13	17.3
Cheese	3	3.6	3	3.9	3	3.9	2	2.6	3	4.2	2	2.7
		24.3		23.1		21.8		19.7		22.2		20.0
Meats	17	20.7	15	19.2	15	19.2	15	19.7	14	19.4	15	20.0
Fish	4	4.9	4	5.1	3	3.9	3	4.0	3	4.2	3	4.0
Eggs	4	4.9	3	3.9	3	3.9	3	4.0	3	4.2	3	4.0
<b>Total animal protein</b>	<b>45</b>	<b>54.8</b>	<b>40</b>	<b>51.3</b>	<b>38</b>	<b>48.8</b>	<b>36</b>	<b>47.4</b>	<b>36</b>	<b>50.0</b>	<b>36</b>	<b>48.0</b>
<b>VEGETABLE PROTEIN</b>												
Bread and flour	19	23.2	20	25.6	24	30.7	23	30.3	22	30.6	23	30.7
Other cereal products	8	9.8	7	9.0	6	7.7	6	8.0	6	8.3	6	8.0
		33.0		34.6		38.4		38.3		38.9		38.7
Potatoes and vegetables	6	7.3	7	9.0	8	10.2	8	10.3	5	6.9	7	9.3
Other foods	4	4.9	4	5.1	2	2.6	3	4.0	3	4.2	3	4.0
<b>Total vegetable protein</b>	<b>37</b>	<b>45.2</b>	<b>38</b>	<b>48.7</b>	<b>40</b>	<b>51.2</b>	<b>40</b>	<b>52.6</b>	<b>36</b>	<b>50.0</b>	<b>39</b>	<b>52.0</b>
<b>Total protein</b>	<b>82</b>	<b>100.0</b>	<b>78</b>	<b>100.0</b>	<b>78</b>	<b>100.0</b>	<b>76</b>	<b>100.0</b>	<b>72</b>	<b>100.0</b>	<b>75</b>	<b>100.0</b>

88. The dietary sources of calcium in the different social classes are shown in Table 37. The important fact revealed by this table is that for all classes well over 50 per cent of the total calcium was derived from milk and cheese and for Classes A and B and for the old age pensioner households the proportion was 61, 57 and 56 per cent. Bread and flour provided about 19 to 22 per cent of the calcium for Classes A and B and 26 to 28 per cent for the other classes. Other cereal products provided about 7 per cent for all classes and vegetables between 5 and 6 per cent.

89. The food sources of iron are shown in Table 38 in which it is seen that all classes obtained from 37 to 42 per cent of their iron from cereals. Old age pensioner households depended on these foods more than any other group and yet obtained 0.5 mg. less than Class A per head daily from this source. Meats provided between 23 and 26 per cent of the iron for all classes and vegetables and eggs together between 20 and 23 per cent.

90. The class differences for vitamin A have already been noted in paragraph 83. In Table 39 it is seen that Class A obtained more than other classes from all sources with the exception of fats and root vegetables. For Classes B, C and D root vegetables were of special importance; next to fats they supplied the largest proportion of this vitamin. Although butter and margarine provided about 1,000 i.u. per head daily in all social classes, the contribution from this source amounted to one quarter only for Class A compared with one third for Class D. There were few other marked social differences except that old age pensioner households obtained relatively more vitamin A from fats, milk, and cheese and relatively less from liver (included in the "other meats" figures) than any other class.

91. The range between classes for vitamin B<sub>1</sub> was small but there were important differences in the contributions from different food groups (Table 40). Class C had a slightly higher consumption than other classes, including Class A, and in company with other classes, except Class A, obtained over 40 per cent of their vitamin B<sub>1</sub> from cereals. All classes obtained between 21 and 23 per cent from potatoes and other vegetables.

92. Riboflavin intake is largely dependent on milk consumption and in consequence, wider class variations were recorded for this nutrient than, for example, with vitamin B<sub>1</sub>, intake of which depends more on bread, flour and potatoes. The contributions of various foods to total riboflavin consumption of different classes is shown in Table 41. Milk and cheese provided between 39 and 44 per cent of the total supplies for all classes, the largest contribution (nearly 44 per cent) from this source being obtained by Class A. The high total intake by this class was the result of large supplies of dairy products, meats, eggs and "other foods." Only 11 per cent was provided by bread and flour compared with 15 per cent from this source for Classes C and D.

93. Nicotinic acid intake is affected chiefly by the consumption of meats and cereals and shows narrower differences between social classes than those recorded for riboflavin. The contributions from various foods are given in Table 42. For all classes meats supplied between 34 and 39 per cent of the total and cereals between 28 and 32; the proportion from meats received by Class A was as high as 39 per cent as the result of the large contribution from unrationed meats, but the supply from cereals was only 28 per cent of the total compared with 32 per cent for Class D. Old age pensioner households obtained less from unrationed meats, cereals and vegetables than other households in Class D.

94. Vitamin C, like vitamin A, showed wide class differences and from Table 43 it is seen that these arose mainly from the contribution of fruit, potatoes and green vegetables. Nearly 30 mg. per head per day, or 47 per cent of the total supply, was obtained from fruit by Class A compared with 14 mg., or 33 per cent of their total supply, by Class C. Potatoes provided 19 mg. for Class C, or 40 per cent, but only 13 mg. or 21 per cent for Class A. Class A obtained as much as 8 mg. from green vegetables, but these foods accounted for 13 per cent only of the total supply.

95. Vitamin D supplies followed a less clearly defined social pattern than that of other nutrients but Table 44 shows the greater importance of margarine as a source of this nutrient for Class D than for Class A. As a result, all fats supplied 43 per cent of the Class D total and only 32 per cent of the much higher total recorded for Class A. Fish and particularly "other foods" contributed towards this higher total. All classes obtained about 10 per cent of their supply from eggs.

**TABLE 37**  
**Calcium Content of Domestic Food Consumption 1950 by Social Class**

*per head per day*

	Social Class												All households					
	A				B				C				D				All Class D households	
	mg.	% of total	mg.	% of total	mg.	% of total	mg.	% of total	mg.	% of total	mg.	% of total	mg.	% of total	mg.	% of total	mg.	% of total
Milk ...	631	53.8	553	50.4	501	46.6	448	44.7	483	48.0	455	45.4	502	47.1	81	7.6	279	26.2
Cheese ...	85	7.3	77	7.0	84	7.8	77	7.7	81	8.0	78	7.8	81	7.6	81	7.6	81	7.6
		61.1		57.4		54.4		52.4		56.0		53.2		54.7				
Bread and flour	219	18.7	239	21.7	290	27.0	284	28.4	263	26.2	280	27.9	279	26.2				
Other cereal products ...	81	6.9	78	7.1	70	6.5	67	6.6	65	6.5	66	6.6	71	6.7				
		25.6		28.8		33.5		35.0		32.7		34.5		32.9				
Vegetables ...	59	5.0	62	5.7	59	5.5	57	5.7	47	4.7	55	5.5	59	5.5				
Eggs ...	18	1.5	17	1.6	15	1.4	14	1.4	13	1.3	14	1.3	15	1.4				
Other foods (a)	80	6.8	71	6.5	56	5.2	56	5.5	53	5.3	55	5.5	59	5.5				
Total ...	1,173	100.0	1,097	100.0	1,075	100.0	1,003	100.0	1,005	100.0	1,003	100.0	1,066	100.0				

(a) Includes welfare vitamin A and D tablets.

**TABLE 38**  
**Iron Content of Domestic Food Consumption 1950 by Social Class**  
*per head per day*

	Social Class													
	A			B			C			D				
	mg.	% of total		mg.	% of total		mg.	% of total		mg.	% of total			
Bread and flour ...	3.5	23.5		3.6	26.0		4.1	29.9		4.2	31.3		4.1	31.6
Other cereal products	2.0	13.7	37.5	1.8	12.9	38.9	1.6	11.7	41.6	1.4	10.9	42.2	1.4	10.8
Meat, rationed (including bacon) ...	2.3	15.8		2.0	14.4		2.0	14.6		2.0	15.0		2.0	15.4
Meat, other ...	1.5	10.3	26.1	1.2	8.6	23.0	1.2	8.8	23.4	1.3	9.6	24.6	1.2	9.2
Vegetables ...	2.1	14.4		2.3	16.5		2.3	16.8		2.2	16.5		2.1	16.1
Eggs ...	0.9	6.2		0.9	6.5		0.8	5.8		0.7	5.5		0.7	5.4
Other foods ...	2.3	15.8		2.1	15.1		1.7	12.4		1.5	11.2		1.5	11.5
Total ...	14.6	100.0		13.9	100.0		13.7	100.0		13.3	100.0		11.7	100.0

**TABLE 39**  
**Vitamin A Content of Domestic Food Consumption 1950 by Social Class**  
*per head per day*

	Social Class											
	A			B			C			D		
	i.u.	% of total	% of total	i.u.	% of total	% of total	i.u.	% of total	% of total	i.u.	% of total	% of total
Fats ...	1,059	24.9	27.1	1,011	28.6	31.7	1,022	33.5	15.2	1,010	31.7	15.6
Root vegetables ...	611	14.4	16.2	535	15.1	15.2	516	16.9	4.9	486	15.2	4.9
Other vegetables ...	335	7.9	6.1	237	5.2	20.1	151	4.9	4.9	157	4.9	4.9
Milk ...	625	14.7	13.8	477	13.5	13.4	456	14.9	13.4	427	13.4	13.7
Cheese...	142	3.3	3.3	129	3.8	4.0	133	4.3	4.0	127	4.0	4.1
Meat, rationed (including bacon) ...	28	0.6	0.7	25	0.7	0.8	27	0.9	0.8	26	0.8	0.8
Meat, other ...	653	15.4	12.7	492	13.9	14.6	368	12.0	14.2	453	14.2	13.8
Eggs ...	306	7.2	7.3	249	7.0	7.3	216	7.1	7.3	231	7.3	7.2
Other foods (a) ...	493	11.6	12.8	432	12.2	8.5	166	5.5	8.5	271	8.5	7.9
Total ...	4,252	100.0	100.0	3,544	100.0	100.0	3,055	100.0	100.0	3,188	100.0	100.0

(a) Includes welfare fish liver oil and vitamin A and D tablets.

T A B L E 4 0

Vitamin B<sub>1</sub> Content (α) of Domestic Food Consumption 1950 by Social Class

per head per day

	Social Class											
	A			B			C			D		
	mg.	% of total		mg.	% of total		mg.	% of total		mg.	% of total	
Bread and flour	0.40	30.9	0.43	33.7	0.49	37.6	0.49	39.5	0.45	38.5	0.48	39.0
Other cereal products	0.10	7.8	0.09	7.0	0.08	6.2	0.07	5.7	0.08	6.8	0.07	5.7
		38.7		40.7		43.8		45.2		45.3		44.7
Potatoes	0.17	13.2	0.20	15.6	0.22	16.9	0.20	16.1	0.17	14.5	0.20	16.3
Other vegetables	0.10	7.8	0.09	7.0	0.08	6.2	0.07	5.6	0.07	6.0	0.07	5.7
		21.0		22.6		23.1		21.7		20.5		22.0
Meats	0.21	16.3	0.20	15.6	0.19	12.3	0.19	15.3	0.19	15.4	0.19	15.4
Milk	0.20	15.5	0.17	13.3	0.16	11.9	0.15	12.1	0.15	12.8	0.15	12.2
Other foods	0.11	8.5	0.10	7.8	0.08	6.2	0.07	5.7	0.07	6.0	0.07	5.7
Total	1.29	100.0	1.28	100.0	1.30	100.0	1.24	100.0	1.18	100.0	1.23	100.0

(α) To allow for losses of vitamin B<sub>1</sub> in cooking 15 per cent has been deducted from all figures as suggested in Medical Research Council War Memorandum No. 14.

**TABLE 41**  
**Riboflavin Content of Domestic Food Consumption 1950 by Social Class**

*per head per day*

	Social Class											
	A			B			C			D		
	mg.	% of total		mg.	% of total		mg.	% of total		mg.	% of total	
Milk ...	0.79	40.9	0.68	38.4	0.68	36.5	0.56	35.0	0.60	37.8	0.57	35.6
Cheese ...	0.05	2.6	0.05	2.8	0.05	2.9	0.05	3.1	0.05	3.1	0.05	3.1
		43.5		41.2		39.4		38.1		40.9		38.7
Bread and flour ...	0.21	10.9	0.21	11.9	0.25	14.7	0.24	15.0	0.23	14.5	0.24	15.0
Other cereal products ...	0.07	3.6	0.07	4.0	0.06	3.5	0.05	3.1	0.05	3.1	0.05	3.1
		14.5		15.9		18.2		18.1		17.6		18.1
Meats ...	0.31	16.0	0.28	15.8	0.28	16.5	0.29	18.1	0.25	15.7	0.28	17.5
Vegetables ...	0.15	7.8	0.16	9.0	0.17	10.0	0.15	9.4	0.13	8.2	0.15	9.4
Eggs ...	0.16	8.3	0.14	7.9	0.12	7.1	0.11	6.9	0.11	6.9	0.11	6.9
Other foods ...	0.19	9.8	0.18	10.2	0.15	8.8	0.15	9.4	0.17	10.7	0.15	9.4
<b>Total</b> ...	<b>1.93</b>	<b>100.0</b>	<b>1.77</b>	<b>100.0</b>	<b>1.70</b>	<b>100.0</b>	<b>1.60</b>	<b>100.0</b>	<b>1.59</b>	<b>100.0</b>	<b>1.60</b>	<b>100.0</b>



**TABLE 42**  
**Nicotinic Acid Content of Domestic Food Consumption 1950 by Social Class**  
*per head per day*

	Social Class														
	A			B			C			D					
	mg.	% of total		mg.	% of total		mg.	% of total		mg.	% of total				
Meat, rationed (including bacon) ...	3.4	24.6		3.2	24.2		3.0	23.1		3.2	24.8		3.2	25.2	
Meat, other ...	2.0	14.5	39.1	1.5	11.2	35.4	1.4	10.8	33.9	1.5	11.3	36.1	1.2	10.0	36.6
Bread and flour ...	3.0	21.7		3.1	23.3		3.5	26.9		3.4	26.6		3.3	27.5	
Other cereal products ...	0.8	5.8	27.5	0.8	6.2	29.5	0.7	5.4	32.3	0.7	5.7	32.3	0.6	5.0	32.5
Vegetables ...	2.3	16.7		2.5	18.9		2.7	20.5		2.5	19.2		2.1	17.5	
Fish ...	0.7	5.1		0.6	4.5		0.5	3.8		0.5	3.9		0.5	4.2	
Other foods ...	1.6	11.6		1.5	11.4		1.2	9.2		1.1	8.5		1.1	9.2	
<b>Total</b> ...	<b>13.8</b>	<b>100.0</b>		<b>13.2</b>	<b>100.0</b>		<b>13.0</b>	<b>100.0</b>		<b>12.9</b>	<b>100.0</b>		<b>12.0</b>	<b>100.0</b>	
															<b>100.0</b>

**TABLE 43**  
**Vitamin C Content of Domestic Food Consumption 1950 by Social Class**  
*Allowing for cooking losses (a)* *per head per day*

	Social Class											
	A			B			C			D		
	mg.	% of total		mg.	% of total		mg.	% of total		mg.	% of total	
Potatoes	13	20.9	16	29.1	19	39.6	17	38.1	13	33.3	16	37.2
Fruit (b)	29	46.8	22	40.0	15	31.2	14	32.3	13	33.3	14	32.6
Green vegetables	8	12.9	6	10.9	5	10.4	5	11.4	5	12.9	5	11.6
Other vegetables	4	6.5	4	7.3	3	6.3	3	6.8	3	7.6	3	7.0
Other foods (c)	8	12.9	7	12.7	6	12.5	5	11.4	5	12.9	5	11.6
Total	62	100.0	55	100.0	48	100.0	44	100.0	39	100.0	43	100.0

(a) Cooking losses used are those suggested in Medical Research Council War Memorandum No. 14.  
 (b) Includes tomatoes.  
 (c) Includes welfare orange juice.

**TABLE 44**  
**Vitamin D Content of Domestic Food Consumption 1950**  
*per head per day*

	Social Class													
	A			B			C			D				
	i.u.	% of total		i.u.	% of total		i.u.	% of total		i.u.	% of total			
Margarine ...	47	25.4	50	26.8	51	29.0	45	35.2	51	34.7	45	35.2	50	34.9
Other fats ...	12	6.5	12	6.4	11	6.2	11	8.6	11	7.5	11	8.6	11	7.7
		31.9		33.2		35.2		42.2		42.2		43.8		42.6
Fish ...	54	29.2	46	24.6	36	20.5	48	37.5	39	26.5	48	37.5	41	28.7
Eggs ...	19	10.3	18	9.6	15	8.5	13	10.1	14	9.5	13	10.1	14	9.8
Other foods (a) ...	53	28.6	61	32.6	63	35.8	11	8.6	32	21.8	11	8.6	27	18.9
Total ...	185	100.0	187	100.0	176	100.0	128	100.0	147	100.0	128	100.0	143	100.0

(a) Includes welfare fish liver oil and vitamin A and D tablets.

### Adequacy of the Diet

96. In comparing the adequacy of the diets of the different social classes, as in estimating the adequacy of the diet generally, a number of difficulties have to be met. Requirements are affected by age, sex and occupation and although the Survey records include details of each attribute, nutrient requirement scales are drawn up only in relation to age, sex and degree of activity, that is, whether the work is light or heavy. Information on the degree of activity of different occupations is scanty and the allocation of occupations to the nutrient requirement categories has in consequence been largely arbitrary. The degree of activity in leisure-time pursuits is not known.

97. A further difficulty arises from the lack of information on the nutritive value of meals eaten outside the home. To meet this problem, the appropriate level of requirements has been reduced by the proportion that the number of outside meals (weighted according to type)<sup>1</sup> bears to the total number of meals normally taken at home.

98. Finally, many of the scales of nutrient requirements in common use, being based directly on the physiological requirements of the individual, relate to the food as eaten. In order to apply these scales to the Survey data, the inedible parts of the foods purchased (or entering into the household as gifts or as "free" supplies), such as meat bones or vegetable peelings, have been allowed for in the tables of food composition used<sup>2</sup> and cooking losses, as suggested in Nutritive Value of Wartime Foods, Medical Research Council War Memorandum No. 14 for vitamin B<sub>1</sub> and vitamin C<sup>3</sup>, also taken into account. In addition, it has been necessary to make an arbitrary allowance for wastage in the kitchen and on the plate, for spoilage and for food fed to domestic pets and a deduction of 10 per cent has accordingly been made from all consumption figures. It is recognised that for many nutrients this allowance is probably too high but for the purpose of estimating the adequacy of the diet, and in view of the absence of precise data on this point, it was considered better to make ample provision for these allowances than to underestimate their effect.<sup>4</sup> The scale of requirements, which is an adaptation of the recommendations of the Committee on Nutrition of the British Medical Association<sup>5</sup>, is reproduced in Appendix F. The figures in Table 34 have been adjusted where necessary and expressed as percentages of these requirements to give the results set out in Table 45. It appears from this Table that during the Survey periods in 1950 all households except those in Class D reached the standard for all nutrients. The whole of Class D was below the standard for calories and old age pensioner households were also below for iron.

99. It has already been shown<sup>6</sup> that there was a slight reduction in the energy value of the diet during 1950, that owing to the lowering of the extraction rate of flour in August 1950 there was a marked fall in iron, vitamin B<sub>1</sub> and riboflavin by October and November,<sup>7</sup> and that similar changes in nicotinic acid were masked by changes in meat consumption.<sup>8</sup> The effect of these changes on the energy values of the household diets in Classes C and D are considered in Table 46 which shows the percentage of the calorie standards met in each period of 1950. Old age pensioner households are tabulated separately.

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<sup>1</sup> See First Report. Appendix A, paragraphs 27 and 28.

<sup>2</sup> *Ibid.*, paragraph 117.

<sup>3</sup> Deduction of 15 per cent from vitamin B<sub>1</sub> totals; deduction of 75 per cent from vitamin C content of green vegetables and 50 per cent from root vegetables.

<sup>4</sup> Further information is being collected on the question of this allowance.

<sup>5</sup> British Medical Association: Report of Committee on Nutrition, 1950.

<sup>6</sup> See paragraph 56.

<sup>7</sup> *Ibid.*

<sup>8</sup> See paragraph 59.

**TABLE 45**  
**Energy Value and Nutrient Content of Domestic Food Consumption 1950, as**  
**Percentage of Standards based on the British Medical Association's**  
**Recommendations**

	Social class						All households
	A	B	C	D			
				Excluding old age pensioner households	Old age pensioner households	All Class D households	
				%	%	%	
Energy Value ...	105	105	101	97	98	97	101
Total protein ...	115	109	105	103	111	105	106
Calcium ...	121	113	109	105	112	106	109
Iron ...	119	115	114	105	88	101	112
Vitamin A ...	180	168	154	129	111	125	150
Vitamin B <sub>1</sub> ...	137	136	133	127	126	127	132
Riboflavin ...	133	122	113	106	114	108	113
Nicotinic acid ...	143	141	133	131	128	131	134
Vitamin C ...	281	259	224	199	177	192	225

**TABLE 46**  
**Energy Value of Domestic Food Consumption by Classes C and D 1950,**  
**expressed in Percentages of Standards based on the British Medical**  
**Association's Recommendations**

	Social class			All Households
	C	D		
		All Class D households	Old age pensioner households	
	%	%	%	%
Jan.-Feb. ...	102	99	96	102
April-May ...	102	98	100	102
July-Aug. ...	100	97	97	100
Oct.-Nov. ...	99	95	99	99

100. These figures suggest that, except for the old age pensioner households, the calorie levels of the diet as measured by this standard, showed slight reductions throughout 1950. Similar trends were shown for Classes A and B, but for these classes the value of the diet still exceeded the calorie standard by 3 to 4 per cent in October and November. In considering the old age pensioner households it is relevant to note that the British Medical Association scale of calorie requirements makes no allowances for increasing age after 20 and thus probably over-estimate the requirements of old people.<sup>1</sup>

101. All households showed reductions in the levels of the diet in respect of iron, vitamin B<sub>1</sub> and riboflavin by October and November. These changes are shown in Table 47 in which average figures for the first three periods of the year are compared with those for October and November. In spite of

<sup>1</sup> Compare the Report of the Committee on Calorie Requirements, Food and Agricultural Organisation of the United Nations, Washington, June 1950.

these reductions, Class C continued to reach the standard for all three nutrients, Class D reached the standard for vitamin B<sub>1</sub> and almost for riboflavin. For the greater part of the year, this class, except for the old age pensioners, also reached the standard for iron. Although the old age pensioner households appeared to be short of this mineral throughout the year no allowance has been made in the table for differences between the iron requirement of younger and older adults, so that the requirements scale for the older persons may well have overestimated their needs.

**TABLE 47**  
**Iron, Vitamin B<sub>1</sub> and Riboflavin Contents of Domestic Food Consumption by Classes C and D 1950 expressed as Percentages of Standards based on the British Medical Association's Recommendations**

	Social Class						All households	
	C		D					
			All Class D households	Old age pensioner households	All Class D households	Old age pensioner households	Jan.-Aug.	Oct.-Nov.
	Jan.-Aug.	Oct.-Nov.						
Iron ...	% 117	% 104	% 104	% 90	% 92	% 85	% 115	% 102
Vitamin B <sub>1</sub> ...	138	121	131	128	116	117	137	120
Riboflavin ...	117	103	111	114	98	104	118	103

102. Other seasonal changes in nutrient content followed the normal seasonal pattern. For vitamin A, although the old age pensioner households reached 111 per cent of the standard on an average for the year, they reached only 104 per cent in January and February and 103 per cent in April and May. In contrast, no other group fell below 119 at any season. As regards vitamin C, Class D reached 139 per cent of the standard and the old age pensioner households 112 per cent during April and May compared with 144 per cent for all households and 191 per cent for Class A. In July and August they reached 327 per cent and 256 per cent respectively compared with 325 per cent for all households and 354 per cent for Class A.

## VII. THE DIETS OF HOUSEHOLDS OF DIFFERENT FAMILY COMPOSITION

103. In Appendix A paragraph 19, the reasons are given for selecting the two-adult households with varying numbers of children for the household composition analyses. These households, excluding the old age pensioner group, accounted for about 58 per cent of the total sample, and households with children of different ages but no adolescents accounted for 46 per cent. It should be remembered that the number of households with four or more children covered at each survey was small, totalling only 112 for the whole year.

### Food Consumption and Expenditure : General

104. Consumption of selected foods, as annual averages, is given in Table 48 and expenditure in Table 49. The seasonal variations are set out in the tables at the end. The outstanding feature of Tables 48 and 49 is the difference between the households with no children and those with several. The marked difference for fresh milk, eggs, meat and (for expenditure only) fresh green vegetables and fruit appears to be mainly the result of the presence of children in the household, but it is also a reflection of the higher social class to which many of the smaller households belong. Of two-adult households with no children, 17 per cent were in Classes A and B, of those with one child, 21 per cent; of households with three children, 16 per cent, and with four or more children, 8 per cent were in Classes A and B.<sup>1</sup>

TABLE 48  
Domestic Consumption of Selected Foods by Households with one Male and one Female Adult and varying numbers of Children

*per head per week*

	Number of children					National average
	0	1	2	3	4 or more	
Fresh milk ... .. pt.	5.5	5.3	5.1	4.9	4.3	4.8
Shell eggs (hens')... .. No.	4.0	3.9	3.4	2.9	2.7	3.4
Fresh rationed meat ... .. oz.	17.3	14.2	12.4	11.2	10.1	13.8
Fats: Butter ... .. oz.	5.0	4.7	4.5	4.3	4.0	4.6
Margarine ... .. oz.	4.2	3.9	3.6	3.6	3.9	3.9
Cooking fat (rationed) oz.	2.1	2.1	2.0	1.9	1.8	2.0
Total (a) ... .. oz.	12.9	12.0	11.0	10.5	10.5	11.6
Potatoes (b) ... .. oz.	64.9	67.3	60.8	59.5	59.3	64.2
Bread (c) ... .. oz.	58.5	51.6	46.1	48.3	53.9	55.5
Flour ... .. oz.	9.2	7.6	6.5	5.8	5.1	7.3

(a) Includes unrationed cooking fat.

(b) Includes chips and crisps.

(c) Exclude fancy bread and sandwiches.

105. The selected foods listed in Table 49 represented over half the total food expenditure for each type of household but the relative importance of each food varied with the family composition. It must be remembered that as the smaller households include a higher proportion of Class A and B households they also tend to make greater use of larder stocks and of supplies from gardens and other "free" sources. Special consideration must be given to the place in the diet of the larger families of those foods most valuable for health and in particular of milk, eggs, fruit and vegetables particularly as expenditure on these foods, some of which are relatively expensive, can provide an index of the economic resources of the household. In Table 49 the household expenditure on the listed foods by each type of household is given and in Table 50 the proportion of each item to total food expenditure. In Table 50 it is seen that these foods together accounted for a smaller proportion of the lower total expenditure of the larger households. On the other hand, fats, rationed meat and the cheaper foods represented a slightly higher proportion.

<sup>1</sup> Table 4, Appendix A.

**TABLE 49**

**Domestic Expenditure on Selected Foods by Households with one Male and one Female adult and varying numbers of Children**

*d. per head per week*

	Number of children					National average
	0	1	2	3	4 or more	
Fresh milk ... ..	26.5	21.4	17.9	15.4	12.7	19.6
Shell eggs (hens') ... ..	10.5	10.4	9.3	8.5	8.1	9.2
Fresh rationed meat ... ..	23.6	20.6	17.8	15.8	14.4	19.5
Fats : Butter ... ..	5.9	5.7	5.8	5.6	5.3	5.6
Margarine ... ..	2.5	2.2	2.3	2.3	2.4	2.3
Cooking fat (rationed)... ..	1.4	1.5	1.4	1.5	1.4	1.4
Total (a) ... ..	10.8	10.1	10.2	9.7	9.5	10.3
Fresh green vegetables (b) ... ..	7.0	5.1	3.9	3.1	2.4	4.4
Fresh fruit (c) ... ..	13.8	14.1	11.4	8.3	6.2	11.1
Potatoes (d) ... ..	7.3	8.2	7.9	7.9	8.2	7.8
Bread and flour (e) ... ..	15.5	13.3	11.7	11.7	12.8	14.0
Expenditure on all foods ... ..	217.8	192.3	167.5	146.9	134.5	177.6

- (a) Includes unrationed cooking fats.
- (b) Includes fresh legumes.
- (c) Includes tomatoes.
- (d) Includes chips and crisps.
- (e) Excludes fancy bread and sandwiches.

**TABLE 50**

**Proportion of Total Domestic Expenditure represented by Selected Foods in Households with one Male and one Female Adult and varying numbers of Children**

	Households with 1 male and 1 female adult and the following numbers of children					National average
	0	1	2	3	4 or more	
Fresh milk ... ..	12.2	11.1	10.7	10.5	9.4	11.0
Shell eggs (hens') ... ..	4.8	5.4	5.5	5.8	6.0	5.2
Fresh green vegetables ... ..	3.2	2.7	2.3	2.1	1.8	2.5
Fresh fruit ... ..	6.3	7.3	6.8	5.6	4.6	6.3
Total ... ..	26.5	26.5	25.3	24.0	21.8	25.0
Fats (including unrationed) ... ..	4.9	5.2	6.1	6.6	7.1	5.7
Fresh rationed meat ... ..	10.8	10.7	10.6	10.7	10.7	11.0
Potatoes ... ..	3.3	4.3	4.7	5.4	6.1	4.4
Bread and flour ... ..	7.1	6.9	7.0	8.0	9.5	7.9
Grand total ... ..	52.6	53.6	53.7	54.2	55.2	54.0



106. The relation between family composition and expenditure is examined further in Table 51 which compares the total expenditure by households in an extended classification according to type. The highest average weekly expenditure per head for 1950 was recorded for households with one male and one female adult only (18s. 0d.) and the next highest (17s. 7d.) for such households with adolescents in addition. Households with other numbers of adults, and adolescents, also showed a high expenditure level. The exceptions to this general statement are found to be the old age pensioner households: for all types the annual average was only 13s. 2d. but the households consisting of one female only were much better placed with an annual average of 14s. 5d.

107. Households with the lowest expenditure per head during 1950 were the miscellaneous group of old age pensioner households (12s. 1d.), and households with one male and one female adult with 3 or with more children (12s. 3d. and 11s. 3d.). Together these households totalled 8.4 per cent of the total sample although, with the bias in the sample towards the large household, this is probably higher than the proportion in the total population.

TABLE 51  
Food Expenditure by Households of Different Family Composition

	Number of households	% of total	Number of persons per household	Expenditure per head per week				
				Jan.-Feb.	April-May	July-Aug.	Oct.-Nov.	Annual average
				s. d.	s. d.	s. d.	s. d.	s. d.
<i>Households (a) with 1 male and 1 female adult and</i>								
No other members ...	688	14.6	2.0	17 7	18 10	18 9	17 6	18 2
1 child (b) ...	634	13.4	3.0	14 11	16 8	16 4	16 2	16 0
2 children ...	567	12.0	4.0	13 8	14 3	13 11	14 0	14 0
3 children ...	198	4.2	5.0	11 9	12 7	12 6	12 3	12 3
4 or more children ...	112	2.4	6.5	11 0	11 1	11 5	11 4	11 3
Adolescents only (c) ...	214	4.5	3.3	17 3	17 10	16 11	18 2	17 7
Adolescents and children	331	7.0	5.4	13 9	14 4	13 11	13 6	13 11
<i>Other households (a) with</i>								
Adult and adolescents only	902	19.1	3.0	15 8	16 9	16 10	16 8	16 6
With 1 or more children	669	14.2	5.2	13 3	14 8	13 9	13 7	13 10
<i>Old age pensioner households with</i>								
1 female ...	150	3.2	1.0	12 9	15 7	14 9	14 6	14 5
1 male and 1 female ...	171	3.6	2.0	12 6	13 6	12 11	13 2	13 0
Others ...	87	1.8	2.1	10 8	13 8	12 5	11 7	12 1
Grand total ...	4,723	100.0	3.5	—	—	—	—	—
National average ...	—	—	—	14 4	15 2	14 11	14 9	14 10

(a) Old age pensioner households are treated as a separate group; they are excluded from the other categories.

(b) Child: person under 14.

(c) Adolescent: person 14 and under 21.

108. The seasonal pattern of expenditure also varied as between different types of households. The following figures show the percentage deviation from the annual average for each of the types of household mentioned, and it should be remembered that the average pattern in 1950 showed a high level of expenditure in the spring. Despite their high average expenditure, the childless

households, with the exception of the female pensioner households, participated as fully as any in this seasonal increase.

	Jan.-Feb.	April-May	July-Aug.	Oct.-Nov.
1 male, 1 female adult with no children ... ..	- 3.2	+ 3.7	+ 3.2	- 3.7
1 male, 1 female adult with 1 child ... ..	- 4.1	+ 2.7	+ 2.0	0
1 male, 1 female adult with adolescents ... ..	- 1.9	+ 1.4	- 3.8	+ 3.3
Old age pensioner households, 1 female ... ..	- 11.6	+ 8.1	+ 2.3	+ 0.6

It is evident that requirements of the different households influenced these seasonal changes; at the same time the lower social class of the larger households was an important factor.

### Consumption and Expenditure: Selected Foods<sup>1</sup>

#### Liquid Milk

109. Although the households with four or more children had the benefit of cheap milk their weekly consumption of milk per head (Table 52) over the year was still less than that of the childless households by as much as 1.2 pints and was even less than the national average.<sup>2</sup> The childless households consumed 28 per cent more but their expenditure was 109 per cent higher. The difference was even more marked in the summer, when milk, except for school milk during the holidays, was freely available. The consumption by childless households during July and August was as much as 1.7 pints or 43 per cent above that of the households with four or more children.

#### Shell Eggs

110. Egg consumption showed wider difference between household types than expenditure (Table 52). The disparity, which is mainly explained by the larger quantities consumed from their own hens and from gifts by the smaller families, is illustrated by the following percentage increases on the figures for the households with four or more children:

	3 children	2 children	1 child	No children
Expenditure ... ..	+ 5%	+ 15%	+ 28%	+ 30%
Consumption ... ..	+ 7%	+ 26%	+ 45%	+ 48%

During the flush season, the childless households consumed 2.4 more eggs per head per week, or 67 per cent more than those with four or more children, expenditure at that time being higher in approximately the same proportion, 63 per cent. Over the year the childless households consumed an average of 1.3 more per head per week, or 48 per cent, with a higher expenditure of 30 per cent, but during the off-season there was little difference in expenditure and the full allocation of eggs was probably taken up by all types of household.

#### Fresh Rationed Meat

111. The childless households consumed on an average about 70 per cent more rationed meat than the larger households (Table 52) but this is largely explained by the lower entitlements of young children. Childless households increased their expenditure in the summer when that of the larger households fell.

<sup>1</sup> See Tables 52 to 55.

<sup>2</sup> A comparison on the basis of all forms of milk is shown in *The British Journal of Nutrition*, Vol. 5, 1951, p. 400.

TABLE 52

**Domestic Consumption and Expenditure by Households with One Male  
and One Female Adult and varying Numbers of Children**

*Fresh Milk, Shell Eggs and Fresh Rationed Meat*

*per head per week*

	Jan.- Feb.	April- May	July- Aug.	Oct.- Nov.	Annual aver- age	Jan.- Feb.	April- May	July- Aug.	Oct.- Nov.	Annual aver- age
	pt.	pt.	pt.	pt.	pt.	d.	d.	d.	d.	d.
<b>FRESH MILK</b>										
<i>No. of children</i>										
0	5.4	5.4	5.7	5.4	5.5	26.0	26.8	27.9	25.2	26.5
1	5.3	5.5	5.2	5.4	5.3	20.3	22.0	21.1	22.3	21.4
2	5.1	5.2	4.9	5.1	5.1	18.4	18.5	17.2	17.6	17.9
3	5.0	5.0	4.7	4.8	4.9	16.0	16.1	15.0	14.7	15.4
4 or more	4.6	4.3	4.0	4.2	4.3	14.1	12.2	12.0	12.4	12.7
National average...	4.8	4.9	4.8	4.7	4.8	19.6	19.8	19.6	19.3	19.6
<b>SHELL EGGS (HENS')</b>										
<i>No. of children</i>										
0	3.2	6.0	4.5	2.3	4.0	8.9	16.8	11.1	5.4	10.5
1	3.5	5.5	4.3	2.4	3.9	8.9	15.1	11.0	6.3	10.4
2	3.2	4.8	3.5	2.1	3.4	8.8	12.9	9.5	6.1	9.3
3	2.8	4.1	3.2	1.6	2.9	8.5	11.5	8.0	6.0	8.5
4 or more	2.8	3.6	2.8	1.7	2.7	8.9	10.3	7.4	5.9	8.1
National average...	3.1	4.9	3.7	2.0	3.4	8.7	13.1	9.2	5.8	9.2
<b>FRESH RATIONED MEAT</b>										
<i>No. of children</i>										
0	17.3	17.3	17.2	17.3	17.3	23.3	23.5	24.1	23.5	23.6
1	15.0	14.2	13.4	14.5	14.2	19.8	21.5	20.3	20.6	20.6
2	12.6	12.6	11.5	12.9	12.4	17.4	18.2	16.8	18.9	17.8
3	11.7	11.4	10.3	11.4	11.2	16.6	16.1	14.9	15.8	15.8
4 or more	10.4	11.0	8.7	10.3	10.1	15.2	14.3	12.8	15.4	14.4
National average...	14.1	14.0	13.0	14.1	13.8	19.4	19.8	18.8	20.0	19.5

**Fats**

112. For all fats (Table 53) consumption by childless households exceeded that of the larger households by 2.4 oz. per head per week or 23 per cent compared with an excess of 14 per cent only in expenditure. The differences were smaller for margarine and cooking fat but the consumption of butter by the childless households was as much as 1 oz. or 25 per cent higher with expenditure only 14 per cent higher. With the increased ration during the summer months, butter consumption per head by all households except those with four or more children increased substantially. The recorded consumption by these larger households fell at that season and since margarine consumption by all households also fell, the summer consumption of fats of all kinds by the childless households amounted to 3.5 oz. more than that of the households with four or more children, or 36 per cent higher. It was even 20 per cent higher than that of the households with three children.

113. At all seasons recorded in the Survey, childless households spent more per head on butter than those with children. Over the year, the difference amounted to 11 per cent more than the households having four or more children. The childless households also increased their expenditure by a greater amount

when the ration was increased. At the beginning of the year, expenditure on margarine was highest among large families but at the end of the year the reverse was true since the larger families barely maintained and in some instances reduced their expenditure, a reflection possibly of their increased butter expenditure. Of particular interest is the fact that, except for these large households, households without children bought more margarine per head at each season than other households. There was little difference in expenditure on cooking fat. For all fats, expenditure increased generally throughout the year, the childless households spending above 10 per cent more than those with many children.

TABLE 53

Domestic Consumption and Expenditure by Households with One Male and One Female Adult and varying Numbers of Children

Fats

per head per week

	Jan.-Feb.	April-May	July-Aug.	Oct.-Nov.	Annual average	Jan.-Feb.	April-May	July-Aug.	Oct.-Nov.	Annual average
	oz.	oz.	oz.	oz.	oz.	d.	d.	d.	d.	d.
<b>BUTTER</b>										
<i>No. of children</i>										
0 ... ..	4.7	5.0	5.8	4.5	5.0	4.6	5.7	6.9	6.4	5.9
1 ... ..	4.4	4.8	5.4	4.3	4.7	4.4	5.6	6.9	6.0	5.7
2 ... ..	4.3	4.6	5.1	4.2	4.5	4.6	5.8	6.7	5.9	5.8
3 ... ..	4.1	4.2	5.0	4.1	4.3	4.3	5.4	6.4	6.1	5.6
4 or more ...	3.5	4.6	4.4	3.7	4.0	4.2	5.6	5.7	5.5	5.3
National average...	4.3	4.6	5.2	4.2	4.6	4.5	5.6	6.6	5.9	5.6
<b>MARGARINE</b>										
<i>No. of children</i>										
0 ... ..	4.5	4.3	3.9	4.1	4.2	2.5	2.4	2.3	2.7	2.5
1 ... ..	4.2	3.8	3.5	4.1	3.9	2.2	2.2	2.1	2.3	2.2
2 ... ..	3.6	3.6	3.4	3.7	3.6	2.4	2.1	2.2	2.3	2.3
3 ... ..	3.7	3.3	3.5	3.8	3.6	2.3	2.3	2.3	2.3	2.3
4 or more ...	4.5	4.3	3.0	3.9	3.9	2.6	2.7	1.9	2.2	2.4
National average...	4.0	3.9	3.8	4.0	3.9	2.4	2.4	2.3	2.4	2.3
<b>COOKING FAT (RATIONED)</b>										
<i>No. of children</i>										
0 ... ..	2.2	2.0	2.1	2.0	2.1	1.6	1.4	1.3	1.5	1.4
1 ... ..	2.2	2.1	2.3	2.0	2.1	1.5	1.4	1.5	1.4	1.5
2 ... ..	2.0	1.8	2.0	2.0	2.0	1.4	1.4	1.4	1.5	1.4
3 ... ..	1.8	2.1	2.0	1.6	1.9	1.3	1.6	1.5	1.4	1.5
4 or more ...	1.8	2.2	1.8	1.5	1.8	1.3	1.6	1.3	1.4	1.4
National average...	2.0	2.0	2.0	1.9	2.0	1.5	1.4	1.4	1.4	1.4
<b>ALL FATS (a)</b>										
<i>No. of children</i>										
0 ... ..	12.9	13.2	13.2	12.3	12.9	9.5	10.7	11.1	11.7	10.8
1 ... ..	12.1	11.9	12.2	12.0	12.0	9.0	9.9	10.9	10.8	10.1
2 ... ..	11.1	10.8	11.3	10.9	11.0	9.8	9.8	10.7	10.3	10.2
3 ... ..	10.3	10.3	11.0	10.2	10.5	8.5	9.8	10.5	10.0	9.7
4 or more ...	10.4	11.6	9.7	10.2	10.5	8.6	10.3	9.1	10.1	9.5
National average...	11.5	11.6	11.9	11.5	11.6	9.2	10.1	10.7	10.7	10.2

(a) Includes unrationed cooking fats.

### Fresh Green Vegetables

114. Over the year weekly expenditure per head on fresh green vegetables as recorded in the Survey periods fell steeply with an increasing number of children in the household, the average expenditure of childless households being nearly three times as great as that of households with four or more children (Table 54). The seasonal pattern is revealed by the percentage deviations from the annual average for each type of household and for the population as a whole. In the largest families there was a definite peak in July and August when these vegetables were both plentiful and cheap; for other families the maximum expenditure occurred in the April-May period with the new season supplies arriving at relatively high prices.

	Jan.-Feb.	April-May	July-Aug.	Oct.-Nov.
	%	%	%	%
No children... ..	- 1	+ 33	- 11	- 24
1 child ... ..	+ 12	+ 29	- 12	- 27
2 children ... ..	+ 15	+ 28	0	- 33
3 children ... ..	- 19	+ 23	+ 19	- 26
4 or more children...	- 29	+ 4	+ 58	- 25
National average ... ..	0	+ 27	+ 2	- 27

TABLE 54

Domestic Expenditure on Fresh Green Vegetables and Fruit by Households with One Male and One Female Adult and varying Numbers of Children  
*d. per head per week*

	Jan.-Feb.	April-May	July-Aug.	Oct.-Nov.	Annual average
	<b>FRESH GREEN VEGETABLES (a)</b>				
<i>No. of children</i>					
0 ... ..	6.9	9.3	6.4	5.3	7.0
1 ... ..	5.7	6.6	4.5	3.7	5.1
2 ... ..	4.1	5.0	3.9	2.6	3.9
3 ... ..	2.5	3.8	3.7	2.3	3.1
4 or more ... ..	1.7	2.5	3.8	1.8	2.4
National average ... ..	4.4	5.6	4.5	3.2	4.4
<b>FRESH FRUIT (b)</b>					
<i>No. of children</i>					
0 ... ..	11.2	13.0	19.8	11.3	13.8
1 ... ..	12.0	11.0	18.3	14.9	14.1
2 ... ..	10.8	8.7	14.9	11.0	11.4
3 ... ..	6.9	6.1	11.1	9.0	8.3
4 or more ... ..	5.0	4.8	8.8	6.4	6.2
National average ... ..	9.6	8.7	15.4	10.8	11.1

(a) Includes salads and fresh legumes.

(b) Includes tomatoes.

### Fresh Fruit

115. For fresh fruit the following seasonal deviations show that the peak expenditure per head for all types of household was recorded in the summer. At that time, the childless households spent about twice as much as the households with three or more children. Over the whole year, the difference was less but still substantial: 70 per cent more was spent by the childless households

compared with those having three children and 120 per cent more compared with the households having four or more children (Table 54).

	Jan.-Feb.	April-May	July-Aug.	Oct.-Nov.
	%	%	%	%
No children...	- 22	- 6	+ 43	- 18
1 child ...	- 15	- 22	+ 30	+ 6
2 children ...	- 5	- 24	+ 31	- 4
3 children ...	+ 17	- 27	+ 34	+ 8
4 or more children ...	- 19	- 23	+ 42	+ 3
National average ...	- 14	- 21	+ 39	- 3

### Potatoes

116. Appreciably fewer potatoes per head were consumed by the households with two or more children than by those with none or one only. These differences may be compared with those for expenditure, all households spending about the same with the exception of the childless households who spent less (Table 55). All households consumed less in the summer than in the winter.

**TABLE 55**  
**Domestic Consumption and Expenditure by Households with One Male and One Female Adult and varying Numbers of Children**

*Potatoes, Bread and Flour*

*per head per week*

	Jan.-Feb.	April-May	July-Aug.	Oct.-Nov.	Annual average	Jan.-Feb.	April-May	July-Aug.	Oct.-Nov.	Annual average
	oz.	oz.	oz.	oz.	oz.	d.	d.	d.	d.	d.
<b>POTATOES (a)</b>										
<i>No. of children</i>										
0 ...	71.2	65.9	58.5	64.1	64.9	7.2	9.2	7.6	5.4	7.3
1 ...	70.1	69.1	57.8	72.9	67.3	7.2	10.8	7.6	7.3	8.2
2 ...	62.3	64.4	54.4	62.1	60.8	7.8	9.0	8.1	6.7	7.9
3 ...	62.1	60.6	55.0	60.2	59.5	6.8	8.6	8.9	7.4	7.9
4 or more ...	67.7	61.0	48.0	60.7	59.3	7.7	8.6	9.1	7.2	8.2
National average...	68.7	66.3	56.3	65.4	64.2	7.4	9.2	7.9	6.7	7.8
<b>BREAD (b)</b>										
<i>No. of children</i>										
0 ...	61.2	58.6	56.1	58.0	58.5	13.7	13.2	12.6	12.8	13.0
1 ...	51.7	51.1	52.8	50.9	51.6	11.2	11.3	11.5	11.5	11.4
2 ...	44.6	46.5	46.9	46.5	46.1	9.5	10.1	10.0	10.5	10.0
3 ...	43.6	48.2	50.7	50.7	48.3	9.5	9.9	10.7	10.9	10.2
4 or more ...	53.2	56.7	53.0	52.6	53.9	10.9	12.2	11.5	11.7	11.6
National average...	55.6	56.8	54.9	54.9	55.5	12.1	12.4	11.9	12.1	12.1
<b>FLOUR</b>										
<i>No. of children</i>										
0 ...	8.4	10.0	9.3	8.9	9.2	2.5	2.5	2.5	2.4	2.5
1 ...	7.3	8.0	8.1	6.8	7.6	2.0	2.0	2.1	1.5	1.9
2 ...	6.5	6.2	7.3	5.8	6.5	1.9	1.5	2.0	1.5	1.7
3 ...	5.9	5.9	6.2	5.0	5.8	1.7	1.5	1.5	1.1	1.5
4 or more ...	5.7	5.9	5.3	3.5	5.1	1.4	1.5	1.0	1.0	1.2
National average...	7.2	7.1	7.8	6.9	7.3	1.9	1.8	2.0	1.8	1.9

(a) Includes chips and crisps.

(b) Excludes fancy breads and sandwiches.

There was considerable variation in expenditure from season to season. The largest families responded least to the new supplies of potatoes in the spring but increased their expenditure relatively during the summer. The percentage deviations from the average were

	Jan.-Feb.	April-May	July-Aug.	Oct.-Nov.
	%	%	%	%
No children...	- 1	+ 26	+ 4	- 26
1 child ...	- 12	+ 32	- 7	- 11
2 children ...	- 1	+ 14	+ 3	- 15
3 children ...	- 14	+ 9	+ 13	- 6
4 or more children...	- 6	+ 5	+ 11	- 12
National average ...	- 5	+ 18	+ 1	- 14

### Bread and Flour

117. Households with no children and those with four or more children consumed per head more bread throughout the year than other households (Table 55). This is in contrast with the consumption of potatoes. For households with one, two or three children high levels of bread consumption were recorded in the summer or autumn. These households also consumed more flour in summer. Childless households and those with four or more children reached their maximum flour consumption in the spring. Childless households consistently spent more on bread and flour together.

### Expenditure on subsidised foods

118. Table 56 sets out the estimated values per head to different households of the subsidies at the rate obtaining in 1950.<sup>1</sup> Households with a small number of children gained most in absolute value but when the subsidy is related to total domestic expenditure, the larger households are seen to have derived the greatest benefit: for households with three or more children the subsidy was equivalent to one-quarter of their expenditure on all food consumed in the home. It will be remembered (paragraph 82 above) that the old age pensioner

TABLE 56  
Estimated Value of the Food Subsidies in Households with one Male  
and one Female Adult and varying Numbers of Children

per head per week

	Households with 1 male, 1 female (a) and				Households of all types
	No children	1 or 2 children	3 children	4 or more children	
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	
Jan.-Feb. ...	2 10	3 2	3 1	3 3	2 10
April-May ...	3 1	3 4	3 3	3 3	3 1
July-Aug. ...	2 11	3 1	2 11	2 8	2 10
Oct.-Nov. ...	2 7	2 11	3 0	2 9	2 8
Annual average ...	2 10	3 1	3 1	3 0	2 10
Annual average as percentage of total domestic food ex- penditure ...	16%	21%	25%	27%	19%

(a) Excludes old age pensioner households.

<sup>1</sup> The list of the principal subsidised foods and the rate of subsidy are given above in footnote to paragraph 81.

household records showed an estimated value for the year of 2s. 7d. or 20 per cent of total expenditure. The smaller households gained more from their larger consumption of eggs, liquid milk at ordinary prices and butter, the larger households from their consumption of welfare milk and bread.

#### Energy Value and Nutrient Content of the Diet

119. The energy value and nutrient content of the diets of two-adult households with varying numbers of children and adolescents are shown in Table 57. Many of the differences between groups which appear in this Table were the result of differences in requirements but some, and particularly those for protein, calcium, iron, riboflavin and nicotinic acid, resulted from a poorer supply of the foods providing these nutrients in the diets of the households with the larger numbers of children. The diets of households with four or more children recorded a nutrient value about 30 to 20 per cent below those of the childless households, with the marked exception of vitamin D, although when measured against a standard of requirements, as in Table 68, they compared much less unfavourably.

TABLE 57  
Energy Value and Nutrient Content of Domestic Food Consumption  
by Households with One Male and One Female Adult and  
varying Numbers of Children

*per head per day*

	Households with one male and one female adult and						
	No children	Children				Adolescents	Children and adolescents
		1	2	3	4 or more		
Energy value... Cal.	2,804	2,575	2,320	2,216	2,168	2,856	2,499
Protein ... g.	91	81	72	68	65	91	77
Animal protein g.	47	41	37	34	30	43	34
Fat ... g.	118	108	97	90	86	114	97
Calcium ... mg.	1,212	1,140	1,046	1,004	959	1,183	1,020
Iron ... mg.	15.9	14.4	12.6	11.6	11.3	16.2	13.7
Vitamin A (a) i.u.	3,949	4,155	3,763	3,340	3,201	3,839	3,103
Vitamin B <sub>1</sub> ... mg.	1.71	1.57	1.40	1.34	1.33	1.78	1.54
Riboflavin ... mg.	2.17	1.83	1.64	1.52	1.43	1.90	1.59
Nicotinic acid mg.	15.4	13.6	11.8	10.8	10.4	15.5	12.9
Vitamin C (a) mg.	102	95	82	72	61	100	78
Vitamin D ... i.u.	167	214	208	195	201	148	152

(a) Includes vitamin welfare foods.

120. The food sources of the different nutrients are considered in the following tables. It is sufficient to show the position in April and May when intake was at its maximum for a number of nutrients, although a comparison is also made where appropriate for the winter months represented by January and February.

121. The energy value figures are given in Table 58 for the winter and the spring seasons and the close similarity of the position at the two dates is evident. Bread, flour and other cereal products provided 35 to 37 per cent of all calories for households with one, two or three children, and bread and flour alone about 25 per cent. For other households the contribution from bread and flour was between 26 and 31 per cent and from all cereals 37 to 41 per cent. It is to be expected that households with children obtain fewer calories from meat because



Energy

	No children							
					1			
	Jan.-Feb.		April-May		Jan.-Feb.		April-May	
	Cal.	% of total	Cal.	% of total	Cal.	% of total	Cal.	% of total
Bread and flour ... ..	744	26.0	741	26.5	631	24.5	642	25.1
Other cereal products ...	355	12.4	313	11.2	299	11.6	290	11.3
		<u>38.4</u>		<u>37.7</u>		<u>36.1</u>		
Fats ... ..	415	14.5	369	13.9	384	14.9	383	
Meats, rationed (including bacon) ... ..	255	8.9	269	8.9	232	9.0	213	8.3
Meats, other ... ..	126	4.4	129	4.6	95	3.7	95	3.7
		<u>13.3</u>		<u>13.5</u>		<u>12.7</u>		
Milk in all forms... ..	297	10.4	297	10.6	296	11.5	321	
Potatoes, including chips	174	6.1	162	5.8	173	6.7	177	6.9
Other vegetables and fruits	92	3.2	90	3.2	90	3.5	74	2.9
		<u>9.3</u>		<u>9.0</u>		<u>10.2</u>		
Sugar and preserves ...	240	8.4	227	8.1	237	9.2	223	
Other foods ... ..	162	5.7	201	7.2	139	5.4	146	
<b>Total ... ..</b>	<b>2,860</b>	<b>100.0</b>	<b>2,798</b>	<b>100.0</b>	<b>2,576</b>	<b>100.0</b>	<b>2,564</b>	<b>100.0</b>



of the smaller entitlement, but the difference between them and households with adults and adolescents only was increased by the larger consumption by the older persons of unrationed meats.

122. Although the consumption per head of milk in the households with children was lower, the proportion of calories derived from this source was higher than in the other households. In all households containing adolescents, milk made a smaller contribution to the total than in any other type of household.

123. In Table 59 the sources of protein for April and May reveal the higher proportion of animal protein obtained by households with no children or with three or less children. These received between 50 and 52 per cent as animal protein. Households with four or more children obtained less from meat, fish and eggs, to give a proportion of 47 per cent, and households with adolescents less from milk to give varying proportions between 45 and 47 per cent. Households with children obtained between 20 and 22 per cent of their animal protein from milk. Other households varied between 16 and 17 per cent.

124. The major source of vegetable protein for all types of household was bread and flour and other cereal products which provided between 34 and 41 per cent of the total supply, both animal and vegetable. Bread and flour accounted for 26 to 30 per cent in those households with no children or with three or less children, that is to say, those households obtaining the higher proportion of animal protein. For the remaining households the contribution from bread and flour was 31 to 35 per cent.

125. Seasonal variations were not large in most households; in January and February, for example, fish provided 0.5 to 1 g. more protein and eggs 1 to 2 g. less than in April and May.

126. The April and May figures for calcium are shown in Table 60. Only in respect of the calcium from milk in the households containing one child and those containing adolescents were the figures for April and May appreciably higher than those for January and February. In April and May, households containing children obtained between 57 and nearly 60 per cent of their calcium from milk and cheese, as compared with those containing adolescents, who obtained just over 50 per cent. The other important contributor of calcium, bread and flour, supplied between 22 and 25.5 per cent to the households with no children or with three or less children, and between 28 and 31 per cent to the other households.

127. The differences in iron intake between the different household types, according to the April and May records, were small (Table 61). Between 40 and 50 per cent of the total iron was supplied by cereals for all households, the proportion being 41 to 42 per cent for two adult households and for those with one or two children, and more than 44 per cent for the rest. Two-adult households obtained 24 per cent from meats, and other households between 19 and 22 per cent, with the exception of households containing four or more children for whom the proportion was as low as 17 per cent.

128. Seasonal differences are illustrated by the comparisons with January and February. All households with the exception of those with four or more children obtained more iron in April and May than in January and February, mainly on account of the seasonal increase in egg consumption which increased the iron contribution from eggs by about 0.5 mg. per head per day in most groups. The households with four or more children obtained nearly 0.5 mg. less from cereals and 0.5 mg. less from meats and vegetables, 0.25 mg. less from "other foods" and only 0.25 mg. more from eggs in the second season.

**TABLE 59**  
**Protein Content of Domestic Food Consumption April-May 1950 by Households with One Male and One Female Adult and varying Numbers of Children**  
*per head per day*

	Households with one male and one female adult and													
	No children		Children				Adolescents		Adolescents and children					
	g.	% of total	1		2		3		4 or more		g.	% of total	g.	% of total
<b>ANIMAL PROTEIN</b>	15	16.5	17	20.7	15	20.8	15	22.1	14	21.2	15	16.1	13	16.7
Milk ...	4	4.4	3	3.7	3	4.2	2	2.9	3	4.6	3	3.2	2	2.6
Cheese...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Meats ...	19	20.8	14	17.1	12	16.7	11	16.2	10	15.2	17	18.3	13	16.7
Fish ...	4	4.4	3	3.7	3	4.2	2	2.9	1	1.5	3	3.2	3	3.8
Eggs ...	5	5.5	5	6.1	4	5.6	4	5.9	3	4.5	6	6.5	4	5.1
Total animal protein	47	51.6	42	51.3	37	51.5	34	50.0	31	47.0	44	47.3	35	44.9
<b>VEGETABLE PROTEIN</b>	26	28.6	22	26.7	19	26.3	20	29.5	23	34.8	29	31.2	26	33.3
Bread and flour ...	8	8.8	7	8.5	6	8.3	6	8.8	4	6.1	8	8.6	6	7.7
Other cereal products	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Potatoes and vegetables	8	37.4	8	35.2	7	34.6	6	38.3	6	40.9	9	39.8	8	41.0
Other foods ...	2	2.2	3	3.7	3	4.2	2	2.9	2	3.0	3	3.2	3	3.8
Total vegetable protein	44	48.4	40	48.7	35	48.5	34	50.0	35	53.0	49	52.7	43	55.1
Total protein ...	91	100.0	82	100.0	72	100.0	68	100.0	66	100.0	93	100.0	78	100.0

TABLE 60

Calcium Content of Domestic Food Consumption April-May 1950 by Households with One Male and One Female Adult and varying Numbers of Children

per head per day

	Households with one male and one female adult and													
	No children		Children								Adolescents		Adolescents and children	
	mg.	% of total	1		2		3		4 or more		mg.	% of total	mg.	% of total
Milk ... ..	552	46.0	596	51.1	546	51.9	536	52.6	483	49.1	543	43.6	451	43.4
Cheese ... ..	100	8.3	83	7.1	76	7.2	67	6.6	77	7.9	95	7.6	72	6.9
		—54.3		—58.3		—59.1		—59.2		—57.0		—51.2		—50.3
Bread and flour ...	304	25.3	265	22.7	235	22.4	245	24.1	285	28.9	351	28.2	321	30.9
Other cereal products ...	88	7.3	77	6.6	65	6.2	60	5.9	40	4.1	87	7.0	67	6.4
		—32.6		—29.3		—28.6		—30.0		—33.0		—35.2		—37.3
Vegetables ... ..	61	5.1	58	5.0	51	4.8	45	4.4	44	4.5	69	5.5	55	5.3
Eggs ... ..	26	2.2	24	2.1	21	2.0	18	1.8	17	1.7	26	2.1	19	1.8
Other foods (a) ...	69	5.8	63	5.4	58	5.5	47	4.6	38	3.8	76	6.0	55	5.3
Total ... ..	1,200	100.0	1,166	100.0	1,052	100.0	1,018	100.0	984	100.0	1,247	100.0	1,040	100.0

(a) Includes welfare vitamin A and D tablets.

**TABLE 61**  
**Iron Content of Domestic Food Consumption April-May 1950 by Households with One Male and One Female Adult and varying Numbers of Children**  
*per head per day*

	Households with one male and one female adult and													
	No children		Children								Adolescents		Adolescents and children	
	mg.	% of total	1		2		3		4 or more		mg.	% of total	mg.	% of total
Bread and flour ...	4.7	29.4	4.2	29.2	3.6	28.8	3.6	30.8	4.2	38.5	5.4	32.3	4.8	34.5
Other cereal products ...	1.8	11.3	1.8	12.5	1.6	12.8	1.6	13.8	1.0	9.2	2.0	11.9	1.6	11.5
Meat, rationed (including bacon) ...	2.1	13.1	1.8	12.5	1.6	12.8	1.5	12.8	1.4	12.8	2.2	13.1	1.8	12.9
Meat, other ...	1.7	10.6	1.3	9.0	1.0	8.0	0.8	6.8	0.5	4.6	1.5	8.9	1.0	7.2
Vegetables ...	2.4	15.0	2.3	16.0	2.0	16.0	1.9	16.2	1.8	16.6	2.5	14.9	2.3	16.6
Eggs ...	1.3	8.1	1.2	8.3	1.1	8.8	0.9	7.7	0.8	7.3	1.3	7.6	1.0	7.2
Other foods ...	2.0	12.5	1.8	12.5	1.6	12.8	1.4	11.9	1.2	11.0	1.9	11.3	1.4	10.1
Total ...	16.0	100.0	14.4	100.0	12.5	100.0	11.7	100.0	10.9	100.0	16.8	100.0	13.9	100.0

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129. Seasonal variations in vitamin A were considerable and are discussed above in paragraph 60. In Table 62 the position for the different types of households is shown for April and May. The proportion derived from fats is seen to increase from 24 per cent to 40 per cent as the number of children increased. The contribution from root vegetables (carrots) was low at this season : compared with the 4 to 8 per cent recorded for April and May, the Survey showed 20 to 23 per cent for January and February, with the larger contributions going to the adult and adolescent households, as is to be expected with a bulky food.

130. The proportionate contribution from milk and cheese in April and May also increased with the number of children but, with the seasonal change in the vitamin A content of milk, was generally less during the winter months for households with children than for those without children. In April and May, 19 to 20 per cent of vitamin A was supplied by meats to the households with adults and adolescents only ; in the households with four or more children the proportion was as low as 7 per cent. In January and February the proportion in these large households was 14 per cent, in the two-adult households 16 per cent and in the households with three children 19 per cent. These variations largely followed the fluctuating supply of liver. Similarly, increasing supplies of eggs in the spring raised the proportion in two-adult households from this source from 7 to 17 per cent and in the households with four or more children from 5 to 10 per cent.

131. The inclusion of welfare foods (cod liver oil and vitamin A and D tablets) in the group of other foods explains why households with children obtained almost twice as large a proportion from this source as other households. The highest proportion (16 per cent) in April and May went to the households with one child.

132. Table 63 deals with vitamin B<sub>1</sub> and shows that the differences between household types were small. All types of household obtained between 40 and 48 per cent of their vitamin B<sub>1</sub> supply from cereals, the proportion being highest for households with four or more children and for households with adolescents and children. All types of household obtained between 21 and 23 per cent from potatoes and other vegetables.

133. Increased egg consumption in all types of household and increased milk consumption in the households with one child and those with adolescents in April and May compared with January and February caused the riboflavin consumption to be slightly higher in the later season for all households except those with four or more children. These consumed less milk, meats and vegetables in April and May than in January and February and did not make up the consequent reduction in riboflavin by their increased egg consumption. But these variations do not affect the general pattern of the riboflavin consumption which is shown in Table 64 for April and May.

134. The most striking feature of the Table is that the households containing children obtained as much as 41 to 44 per cent of their riboflavin from milk and cheese, the proportion increasing with the number of children, compared with the two-adult households and those containing adolescents who obtained between 35 and 37 per cent from these foods. Cereals provided 20 to 21 per cent for households with four or more children, or with adolescents, and from 16 to 18 per cent for the rest. There was a steep fall in the contributions from meats from 17 per cent in two-adult households to 11 per cent in households with four children. Vegetables provided between 8 and 10 per cent for all groups.

135. The pattern of nicotinic acid supplies showed little change between the seasons and Table 65 sets out the position for April and May. Meats

**TABLE 62**  
**Vitamin A Content of Domestic Food Consumption April-May 1950 by Households with One Male and One Female Adult and varying Numbers of Children**  
*per head per day*

	Households with one male and one female adult and													
	No children		Children								Adolescents		Adolescents and children	
	April-May		1		2		3		4 or more		April-May		April-May	
	i.u.	% of total	i.u.	% of total	i.u.	% of total	i.u.	% of total	i.u.	% of total	i.u.	% of total	i.u.	% of total
Fats ... ..	919	24.2	1,058	27.2	996	30.5	920	31.9	1,052	39.7	1,075	30.3	1,051	34.2
Root vegetables ... ..	289	7.6	230	5.9	183	5.6	173	6.0	95	3.6	199	5.6	206	6.7
Other vegetables ... ..	289	7.6	323	8.3	209	6.4	173	6.0	175	6.6	277	7.8	200	6.5
		—15.2		—14.2		—12.0		—12.9		—10.2		—13.4		—13.2
Milk ... ..	483	12.7	533	13.7	467	14.3	473	16.4	405	15.3	458	12.9	381	12.4
Cheese ... ..	163	4.3	136	3.5	124	3.4	107	3.7	125	4.7	160	4.5	117	3.8
		—17.0		—17.2		—18.1		—20.1		—20.0		—17.4		—16.2
Meat, rationed (including bacon) ... ..	30	0.8	27	0.7	23	0.7	20	0.7	21	0.8	25	0.7	24	0.8
Meat, other ... ..	745	19.6	564	14.5	493	15.1	326	11.3	172	6.5	657	18.5	483	15.7
		—20.4		—15.2		—15.8		—12.0		7.3		—19.2		—16.5
Eggs ... ..	638	16.8	401	10.3	356	10.9	300	10.4	270	10.2	436	12.3	317	10.3
Other foods (a) ... ..	243	6.4	619	15.9	415	12.7	392	13.6	334	12.6	262	7.4	295	9.6
<b>Total</b> ... ..	<b>3,799</b>	<b>100.0</b>	<b>3,891</b>	<b>100.0</b>	<b>3,266</b>	<b>100.0</b>	<b>2,884</b>	<b>100.0</b>	<b>2,649</b>	<b>100.0</b>	<b>3,549</b>	<b>100.0</b>	<b>3,074</b>	<b>100.0</b>

(a) Includes welfare fish liver oil and vitamin A and D tablets.



TABLE 63

Vitamin B<sub>1</sub> (a) Content of Domestic Food Consumption April-May 1950 by Households with One Male and One Female Adult and varying Numbers of Children  
*per head per day*

	Households with one male and one female adult and													
	No children		Children								Adolescents		Adolescents and children	
	mg.	% of total	1		2		3		4 or more		mg.	% of total	mg.	% of total
Bread and flour ...	0.55	37.4	0.47	35.2	0.42	34.8	0.43	37.3	0.50	43.0	0.63	39.8	0.57	41.4
Other cereal products ...	0.10	6.8	0.09	6.5	0.07	6.1	0.08	6.6	0.05	4.6	0.11	7.8	0.08	5.7
Potatoes ...	0.21	14.4	0.22	16.5	0.21	17.1	0.19	16.7	0.20	16.9	0.23	14.4	0.24	17.5
Other vegetables ...	0.10	6.6	0.08	6.2	0.06	5.4	0.06	5.1	0.05	4.5	0.10	6.3	0.07	5.5
Meats ...	0.24	16.0	0.20	14.9	0.19	15.7	0.16	13.8	0.14	12.6	0.22	13.9	0.19	13.9
Milk ...	0.17	11.7	0.19	13.8	0.17	14.3	0.17	14.6	0.15	13.2	0.17	11.0	0.14	10.4
Other foods ...	0.10	7.1	0.09	6.9	0.08	6.6	0.06	5.9	0.06	5.2	0.12	7.8	0.08	5.6
Total ...	1.47	100.0	1.34	100.0	1.20	100.0	1.15	100.0	1.15	100.0	1.58	100.0	1.37	100.0

(a) To allow for losses of vitamin B<sub>1</sub> on cooking 15 per cent has been deducted from all figures as suggested in Medical Research Council War Memorandum No. 14.

**TABLE 64**  
**Riboflavin Content of Domestic Food Consumption April-May 1950 by Households with One Male and One Female Adult and**  
**varying Numbers of Children**  
*per head per day*

	Households with one male and one female adult and													
	No children		Children						Adolescents		Adolescents and children			
	mg.	% of total	1		2		3		4 or more		mg.	% of total	mg.	% of total
Milk ... ..	0.68	33.6	0.74	38.5	0.68	39.8	0.66	41.3	0.60	40.5	0.67	32.8	0.56	33.2
Cheese ... ..	0.07	3.4	0.05	2.7	0.05	2.9	0.04	2.5	0.05	3.4	0.06	2.9	0.04	2.7
		—37.0		—41.2		—42.7		—43.8		—43.9		—35.7		—35.9
Bread and flour ...	0.29	14.3	0.25	13.0	0.22	12.9	0.22	13.7	0.26	17.6	0.33	16.2	0.30	17.7
Other cereal products ...	0.07	3.4	0.07	3.6	0.06	3.5	0.06	3.7	0.04	2.7	0.08	3.9	0.06	3.6
		—17.7		—16.6		—16.4		—17.4		—20.3		—20.1		—21.3
Meats ... ..	0.34	16.7	0.29	15.1	0.24	14.0	0.21	13.1	0.16	10.8	0.29	14.3	0.24	14.6
Vegetables ... ..	0.18	8.9	0.17	8.9	0.15	8.8	0.14	8.8	0.13	8.8	0.18	8.8	0.17	9.9
Eggs ... ..	0.22	10.8	0.20	10.4	0.18	10.5	0.15	9.4	0.14	9.5	0.22	10.8	0.16	9.5
Other foods ... ..	0.18	8.9	0.15	7.8	0.13	7.6	0.12	7.5	0.10	6.7	0.21	10.3	0.15	8.8
Total ... ..	2.03	100.0	1.92	100.0	1.71	100.0	1.60	100.0	1.48	100.0	2.04	100.0	1.68	100.0

**TABLE 65**

**Nicotinic Acid Content of Domestic Food Consumption April - May 1950 by Households with One Male and One Female Adult and varying Numbers of Children**

*per head per day*

	Households with one male and one female adult and													
	No children		Children				Adolescents				Adolescents and children			
	mg.	% of total	1		2		3		4 or more		mg.	% of total	mg.	% of total
Meat, rationed (including bacon) ...	3.7	24.6	3.2	24.3	2.9	25.1	2.6	24.6	2.5	24.7	3.2	21.2	3.1	23.6
Meat, other ...	2.0	13.0	1.4	10.6	1.2	10.2	0.9	8.3	0.6	5.4	1.4	9.4	1.2	9.2
Bread and flour ...	3.8	25.6	3.3	24.9	2.9	25.1	2.9	27.4	3.4	33.1	4.3	28.7	3.8	29.5
Other cereal products ...	0.9	5.8	0.8	6.0	0.7	5.8	0.7	6.3	0.4	4.6	0.9	6.0	0.7	5.2
Vegetables ...	2.6	17.3	2.7	20.1	2.3	20.5	2.2	20.4	2.2	21.3	2.9	18.8	2.7	20.6
Fish ...	0.6	3.7	0.5	3.8	0.4	3.4	0.3	2.9	0.2	1.8	0.5	3.4	0.4	3.2
Other foods ...	1.5	10.0	1.3	10.3	1.1	9.9	1.1	10.1	0.9	9.1	1.9	12.5	1.1	8.7
Total ...	15.1	100.0	13.2	100.0	11.5	100.0	10.7	100.0	10.2	100.0	15.1	100.0	13.0	100.0

provided between 30 and 38 per cent of the total and cereals a similar proportion, but the proportion from meats declined and that from cereals increased with the number of children. Households with children obtained slightly more from vegetables.

136. It was noted in paragraphs 60 and 61 above that vitamin C supplies varied seasonally and the figures in Table 66 show the position at two important seasons, the late winter and the spring. For all households the total supply was less in the spring. The range in January and February was from 49 to 30 mg. per head per day, recorded for households with one child and for households with four or more children respectively. In April and May the range had fallen to between 40 and 22, these figures being recorded for households with no children and for those with four or more. Generally, the supply per head fell as the number of children increased.

137. Fruit was the most important source (between 27 and 48 per cent) at these two seasons although for those households with four or more children, potatoes, the next largest source for other households, were barely less important. For households with two or three children "other foods"<sup>1</sup> provided more than potatoes in April and May and for the three-children households at this time this source even out-placed fruit. During the two seasons green vegetables provided between 17 and 18 per cent of the total supply in households with no children and between 9 and 10 per cent in households with four or more children.

138. Although there are marked seasonal variations in vitamin D supplies, affecting household types differently, the pattern set out in Table 67 for April and May brings out the main features of the variation from one type of household to another. Fats were an important source of this vitamin, providing between 30 to 50 per cent of total supplies and were particularly large contributors to the diets of households with adults only and those with adolescents and many children. Equally important in the diets of households with children, and particularly in the spring, was the group of "other foods" which included cod liver oil and A and D tablets supplied under the Welfare Foods Scheme. For other households, the second major source was fish, which supplied a substantial proportion to all household diets with the exception of those of households with four or more children.

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<sup>1</sup> This group includes welfare orange juice. The high intake recorded for the households without children resulted from their high milk consumption.

TABLE 66

**Vitamin C Content (a) of Domestic Food Consumption, January-February and April-May 1950 by Households with One Male and One Female Adult and varying Numbers of Children**

	No children		Children								Adolescents		Adolescents and children	
	mg.	% of total	1		2		3		4 or more		mg.	% of total	mg.	% of total
			mg.	% of total	mg.	% of total	mg.	% of total	mg.	% of total				
Fruit ... Jan.-Feb. Apr.-May	21 15	44.7 37.5	21 12	42.8 33.4	17 11	40.5 35.5	12 7	34.3 26.9	8 6	26.7 27.3	25 15	48.0 41.7	15 8	39.5 29.6
Potatoes ... Jan.-Feb. Apr.-May	10 8	21.3 20.0	10 8	20.4 22.2	9 6	21.4 19.4	9 6	25.7 23.1	10 6	33.3 27.3	11 7	21.2 19.4	11 7	28.9 26.0
Green vegetables Jan.-Feb. Apr.-May	8 7	17.0 17.5	7 5	14.3 13.9	5 5	11.9 16.1	4 3	11.4 11.5	3 2	10.0 9.1	7 5	13.5 13.9	4 4	10.5 14.8
Other vegetables Jan.-Feb. Apr.-May	1 3	2.1 7.5	4 3	8.2 8.3	3 2	7.1 6.5	3 2	8.6 7.7	2 2	6.7 9.0	4 3	7.7 8.3	3 2	7.9 7.4
Other foods (b) Jan.-Feb. Apr.-May	7 7	14.9 17.5	7 8	14.3 22.2	8 7	19.1 22.5	7 8	20.0 30.8	7 6	23.3 27.3	5 6	9.6 16.7	5 6	13.2 22.2
Total ... Jan.-Feb. Apr.-May	47 40	100.0 100.0	49 36	100.0 100.0	42 31	100.0 100.0	35 26	100.0 100.0	30 22	100.0 100.0	52 36	100.0 100.0	38 27	100.0 100.0

(a) With allowance for cooking losses as suggested in Medical Research Council War Memorandum No. 14.  
 (b) Includes welfare orange juice.

**TABLE 67**  
**Vitamin D Content of Domestic Food Consumption April-May 1950 by Households with One Male and One Female Adult and**  
**varying Numbers of Children**  
*per head per day*

	Households with one male and one female adult and											
	No children		Children								Adolescents and children	
	April-May		1		2		3		4 or more		Adolescents and children	
	i.u.	% of total	April-May		April-May		April-May		April-May		April-May	
			i.u.	% of total	i.u.	% of total	i.u.	% of total	i.u.	% of total	i.u.	% of total
Margarine ... ..	55	37.4	49	21.7	46	27.2	43	25.9	56	30.9	55	39.3
Other fats ... ..	9	6.1	12	5.3	11	6.5	10	6.0	11	6.1	12	8.6
		43.5		27.0		33.7		31.9		37.0		47.9
Fish ... ..	34	23.1	24	10.6	18	10.7	12	7.2	2	1.1	41	29.3
Eggs ... ..	29	19.8	24	10.6	21	12.4	18	10.9	16	8.8	26	18.5
Other foods (a) ...	20	13.6	117	51.8	73	43.2	83	50.0	96	53.1	6	4.3
Total ... ..	147	100.0	226	100.0	169	100.0	166	100.0	181	100.0	140	100.0
											153	100.0
												37.3
												7.2
												44.5
												15.7
												12.4
												27.4

(a) Includes welfare fish liver oil and vitamin A and D tablets.

### Adequacy of the Diet

139. The methods for calculating requirements and the standards used for comparison in the present study have already been discussed.<sup>1</sup> The consumption figures in Table 57 have been adjusted accordingly and expressed in Table 68 as percentages of the calculated standards.

140. The standard for calories was about reached by all households but the level is seen to have fallen with increasing numbers of children and with adolescents. For total protein the calculations suggest a slightly better position except that the decline with an increasing number of children is even more marked. The position was closely similar for calcium, but for iron and the other nutrients, with few exceptions, the standard was easily reached by all types of households.

141. According to these standards there are certain types of households on the margin and the seasonal trends for these households are of special interest. Thus, although the gradual fall in energy value over the year noted above<sup>2</sup> for

**TABLE 68**  
**Comparison of Energy Value and Nutrient Content of Domestic Food Consumption with Standards based on the British Medical Association's Recommendations 1950**

	Households with one male and one female adult and						
	No children	Children				Adolescents	Adolescents and children
		1	2	3	4 or more		
Energy value ...	106	109	103	104	101	100	96
Total protein ...	123	117	105	102	94	103	91
Calcium ...	136	120	106	102	92	114	94
Iron ...	121	123	114	111	107	115	107
Vitamin A ...	145	179	175	163	165	149	144
Vitamin B <sub>1</sub> ...	139	143	137	137	134	132	125
Riboflavin ...	135	126	121	117	109	110	101
Nicotinic acid	146	146	136	130	123	136	124
Vitamin C ...	271	266	240	216	174	226	189

all households is much less apparent for a number of household types, the following figures giving energy value as percentage of requirements show that it was a marked feature of the diets in the marginal households.

	Households with one male and one female adult and		
	4 or more children	Adolescents	Children and Adolescents
	%	%	%
Jan.-Feb. ...	108	104	98
April-May ...	102	100	98
July-Aug. ...	97	98	94
Oct.-Nov. ...	98	98	93

<sup>1</sup> See paragraphs 96 *et seq.*, above.

<sup>2</sup> See paragraph 56 above.

142. Other seasonal changes affecting these marginal households are also of importance. For households with four or more children and those with children and adolescents, both the protein and the calcium percentages were low at all seasons, the calcium figure failing to reflect the more plentiful supplies of milk which were available in April and May and in July and August. The vitamin C intake for April and May was only 88 per cent of the standard in households with four or more children, and 103 per cent in households with adolescents and children, as compared with 162 per cent in the childless households and 152 per cent in households with one child only. For these same marginal households the effects of the changes associated with the lowering of the extraction rate of flour in August can be illustrated by comparing the percentage of the standard reached during the first three seasons with that recorded for October and November. Taking into account the other changes in the diet at that time described in Section V, the following reductions in levels are revealed :

	Households with one male and one female adult and					
	4 or more children		Adolescents		Children and Adolescents	
	Average Jan.-Aug.	Oct.-Nov.	Average Jan.-Aug.	Oct.-Nov.	Average Jan.-Aug.	Oct.-Nov.
	%	%	%	%	%	%
Iron ...	110	96	118	105	110	95
Vitamin B <sub>1</sub>	139	118	136	121	130	112
Riboflavin...	114	97	112	102	104	91



## APPENDIX A

### National Food Survey Methods during 1950<sup>1</sup>

#### Introduction of a National Sample and Improvement in Technique

1. The sample covered by the Survey from 1941 to 1949 represented that part of the civilian population living in working-class households in the main urban areas of Great Britain. In 1950 the sample was extended to represent the whole population living in both urban and rural households. In each household surveyed the housewife was asked to keep a record for one week of all the food she purchased for her family and of all the food entering the household for which she made no payment, including food from gardens and allotments and obtained as gifts. In addition, she recorded a brief description of each meal served and listed any meals taken outside the home by any member of the family. Data on the age, sex and occupation of each member of the household were also collected, together with brief details of any visitors taking meals with the household during the week of the Survey. The household, defined for the purposes of the Survey, included all persons<sup>2</sup> for whom the particular housewife catered and extended wider than the family in the usual sense.

2. The information was collected on behalf of the Ministry by specially trained women investigators employed by an independent firm which has specialised in market research for many years. Before the household was visited the housewife received a letter explaining the nature of the Survey and, at the first visit, the investigator explained the purpose in more detail, demonstrating to the housewife how to record the entries in the log book. Two pages were provided for each day of the week, one for the weight and cost records of food purchased and of food obtained free, and the other for the additional information required. The investigator weighed the stock of food held by the housewife at the first visit, and again exactly seven days later so that the net change in stocks during the week could be estimated and with it the total quantity of food consumed in the household during that week. The investigator visited the house at least twice in the course of the Survey week to ensure that the housewife was keeping her record correctly.

3. During the period from 1941 to 1949, when the Survey was designed to cover urban working-class households only,<sup>3</sup> the sample was selected first by choosing towns representative in size, industry and character of all the urban areas of Great Britain. In these towns, wards known to be of a predominantly working-class character were selected and from their electoral registers every 35th address listed starting at a random point. Where the investigator was unable to place a log book at these selected addresses she was allowed to substitute addresses from the houses in the particular locality, following rules carefully laid down for her. In 1950, the method was modified to include households of all social classes in both urban and rural areas in the sample. Parliamentary constituencies in Great Britain whose population, following the electoral reform of 1948 had become more nearly equal in size, were classified by region and density of population and were selected on a random basis. Addresses were again chosen by random methods from the electoral register in each of the selected constituencies, and on this occasion a list of substitute addresses also selected for use by the investigator when an address on her primary list was not available.

#### Response Rate in the National Food Survey 1950

4. In 1949, half the completed log books came from "substitute" households because many of the housewives originally selected were out when the investigator

<sup>1</sup> Compare also Appendix A of the First Report, 1951.

<sup>2</sup> A person is defined as one taking at least 16 meals at home during the Survey week.

<sup>3</sup> There were two breaks in the continuity of the urban working-class Survey, between October 1947 and March 1948. Special surveys of other groups were undertaken during this interval and occasionally at other times.

called, or refused to take part in the survey, or failed to complete log books once started.<sup>1</sup> In 1950, addresses were classified in three stages, instead of two. Primary and secondary addresses were both selected at random from electoral rolls in chosen constituencies, the primary list consisting of the 1st, 3rd, 5th, etc., address selected, and the secondary list of the 2nd, 4th, 6th, etc. The primary addresses were first called on, and received up to three calls if necessary. If no contact was made after three calls at a primary address, it was replaced by a secondary address, which received one call. Only after failure at both the primary and the secondary addresses was the interviewer permitted to substitute another household. The method of substitution remained as described in the First Report.<sup>2</sup>

5. By the introduction of the secondary list of addresses, the proportion of "substitutes" was reduced from 50 per cent to 17 per cent, as may be seen from the figures for completed log books in Table 1. The reduction of "substitutes" improved the representativeness of the sample and the response rate in 1950 was at least as good as in earlier years in spite of the extension of the sample to cover all classes and all areas.

**TABLE 1**  
**Response Rate in the National Food Survey 1950**

	Primary Addresses		Secondary Addresses		Substitute Addresses
		%		%	
Completed Log Books ... ..	2,300	36	1,635	26	789
Incomplete Log Books ... ..	523	8	398	6	278
Log Books refused—					
(a) Housewife at work ... ..	227	4	208	3	} 2,199
(b) Sickness in households ... ..	397	6	183	3	
(c) Other reasons ... ..	1,507	24	1,033	16	
Unsuitable addresses (a) ... ..	204	3	180	3	76
No contact ... ..	1,124	18	1,635	26	4,063
Unused addresses ... ..	93	1	1,096	17	Not applicable
<b>Total addresses ... ..</b>	<b>6,375</b>	<b>100</b>	<b>6,368</b>	<b>100</b>	<b>7,405</b>

(a) Houses found to be empty, together with public houses, shops, hotels and other establishments outside the intended scope of the survey.

6. Completed log books were obtained from 36 per cent of the primary addresses on the investigators' lists and the desired number for purposes of tabulation was obtained by the addition of 1,635 log books (or 26 per cent of addresses) collected from secondary addresses and 789 from substitute addresses, to give the following composition of the sample finally tabulated:—

Primary addresses ... ..	49
Secondary addresses ... ..	34
Substitute addresses ... ..	17
	100

7. A high response rate is desirable, but even with a relatively low response rate there is little bias if the households which do not co-operate are similar in character to those which do. In January 1950 a comparison was possible between those primary households which completed log books and those which refused or were not interviewed, since about 90 per cent of the housewives who refused to accept or complete log books were willing to supply a few particulars about their households. At addresses where contact was not made, a stamped letter was left asking for these particulars and about one-third of the letters were returned. Two possible sources of bias were found, as shown in Table 2. The proportion of refusals and non-contacts was high among households without children under 16, and refusals were also high in social class A.

<sup>1</sup> See First Report, Appendix A, paragraph 32.

<sup>2</sup> Appendix A, paragraph 14.

**TABLE 2**  
**Sources of Bias in the National Food Survey, January 1950**

	Primary households		
	Completing log books	Giving particulars of household only	
		Refusing to accept log books	Contact not made
Proportion of households without children under 16	50%	74%	66%
Proportion of households in Class A ... ..	3%	8%	2%

Separate figures are not given for households which started log books but did not complete them, as the characteristics of these households did not differ noticeably from those completing them.

8. Bias due to over-representation of children is likely to have a greater effect on the national average than bias due to under-representation of the upper social classes, for two reasons :

- (a) Class A carries a small weight in relation to the population as a whole, while the bias due to over representation of children extends to the whole sample ;
- (b) there is evidence that, for average food consumption and expenditure per head, the differences due to household composition are greater than those due to social class.

9. The two sources of bias are to some extent related, as childless households tend to be more common in Class A. Also, the two effects on the average are likely to be additive ; adults consume more of a number of foods than children and the upper social classes consume more than the lower. In general, the National Food Survey figures may be expected to err on the low rather than on the high side ; but the Survey covers a large number of items at any one time and for the majority of these the bias will be slight.

10. The political constituencies selected for the National Food Survey fieldwork in 1950 are listed below :

<i>Constituency</i>	<i>Population Density Group</i>	<i>Region</i>
Leeds, North East ... ..	I	<i>Northern and East and West Riding</i>
Newcastle North ... ..	I	
Hartlepool ... ..	IV	
Bridlington ... ..	V	
Sedgefield ... ..	VI	
Chester-le-Street ... ..	VI	
Liverpool, Kirkdale... ..	I	<i>North Western</i>
Manchester, Gorton ... ..	I	
Stretford ... ..	I	
Nelson and Colne ... ..	III	
High Peak ... ..	V	
Westhoughton ... ..	V	
Nottingham, North West ... ..	II	<i>North Midland and Eastern</i>
Hemel Hempstead ... ..	V	
Cambridgeshire ... ..	VI	
South East Derbyshire ... ..	VI	
Birmingham Small Heath ... ..	I	<i>Midland</i>
Stoke-on-Trent ... ..	II	
Kidderminster ... ..	III	

Constituency	Population Density Group	Region
Brentford and Chiswick ... ..	I	London
Carshalton ... ..	I	
Hammersmith, North ... ..	I	
Holborn and St. Pancras ... ..	I	
Lewisham, North ... ..	I	
Poplar ... ..	I	
Richmond ... ..	I	
Southampton, Itchen ... ..	III	South Eastern and Southern
Dover... ..	V	
Folkestone and Hythe ... ..	V	
Basingstoke ... ..	VI	
Bath ... ..	IV	South Western
Honiton ... ..	IV	
Stroud and Thornbury ... ..	VI	
Tavistock ... ..	VI	
Bedwellty ... ..	IV	Wales
Caerphilly ... ..	IV	
East Flint ... ..	VI	
Glasgow, Shettleston ... ..	I	Scotland
Aberdeen North ... ..	III	
Perth and East Perthshire ... ..	VI	

Note : The population density groups are :—  
 I The conurbations of more than 500,000 persons.  
 II Large towns of 250,000–500,000 persons.  
 III Towns of 100,000–250,000 persons.  
 IV Towns of 50,000–100,000 persons.  
 V Majority of the electorate living in urban districts of less than 50,000 persons.  
 VI The majority of the electorate living in rural districts.

**Definitions used in analysis : rural, urban and working-class households**

11. By " rural household " is meant a household situated in a Rural District in a parliamentary constituency where such Districts predominate. In constituencies that are largely urban, field work resources were too limited to permit visits to the Rural Districts as well as the urban areas. On the other hand, it was not possible, even in the predominantly rural constituencies, to cover the more remote areas. Thus the extremes in the rural section of the population were probably unrepresented. Further, since voters are classified alphabetically in the electoral lists of Rural Districts (and not according to street, as is the practice in urban areas) households comprising a number of voters having different names, that is, the larger adult households, may be slightly over-represented in rural areas compared with the urban areas.

12. The division of urban households into " working-class " and " other " follows the practice of the Survey during previous years and is described in the First Report.<sup>1</sup> All households located in a working-class ward are classified as working-class except where a middle-class household can be identified. Similarly, working-class households found in wards other than working-class wards are excluded from the category of " other urban households ". This technique has been developed during many years of field work and corresponds broadly to that used to provide the social class grouping. Accordingly, the definition of a working-class household (in urban areas) is a household falling within the Classes C or D or, where the head of the household is a manual worker, in Class B.

**Social Classes**

13. For grouping households according to social class, head of household incomes are used with the following divisions :

Social Class	Gross Income of Head of Household
Class A ... ..	£13 a week or over
Class B ... ..	£8 to £13 a week.
Class C ... ..	£4 10s. to £8 a week.
Class D ... ..	Less than £4 10s. a week.

<sup>1</sup> Appendix A.

Head of household income is obtained directly or inferred in some instances from details of occupation. The type of dwelling and other amenities are also taken into consideration in those instances, for example, where a family is living on private means or the head of the household is working on his own account. No information was obtained by the National Food Survey, as described in this Report, about supplementary family incomes and the social class grading used is quite distinct from a grading according to total income. A family in Class B might be in receipt of a higher total income than a family in Class A. The classification suggests differences in social rather than economic standing although there is a large measure of similarity between the two systems, particularly in the broad range of differences.

14. The distribution of households by these social classes in the National Food Survey contains a bias because Class A housewives were less willing to co-operate in the Survey and because there are proportionately more households without children<sup>1</sup> in Class A. These smaller households tend to be slightly under-represented in the sample. In Class D, the small size of the households was due mainly to the presence of old age pensioners.

15. The use of a social class analysis raises the possibility of a comparison of class differences with those recorded before the war in the Surveys conducted by Orr and Crawford and Broadley. Reference has already been made to these Surveys in the First Report<sup>2</sup> where a comparison is drawn between the diet of the working class during and before the war. Orr's analysis rested on a classification of total family incomes expressed as per head incomes and is not directly comparable with the National Food Survey social class data; but the national averages are comparable. Comparisons between these data and those recorded in 1950 are discussed below in Appendix C.

16. The social class grouping adopted by Crawford and Broadley was "originally prepared by the Institute of Incorporated Practitioners in Advertising and recommended for adoption by all engaged in field investigations into economic and marketing problems"<sup>3</sup> and is the forerunner of the systems used eventually in the National Food Survey. Both are compared below in Table 3. The largest group of heads of household in 1950 was in the £225-£339 income group. Before the war, the largest group was in the income range £125-£249.

TABLE 3

**Social Class: Head of Household Income and Percentage of Population**

Crawford and Broadley, 1936-1937			National Food Survey, 1950		
Class	Approximate annual income of head of household	Estimated percentage of total population	Class	Approximate annual income of head of household	Recorded percentage of population
AA	£1,000 and over ...	1%	A	£650 and over ...	3%
A	£500 to £999 ...	4%	B	£400 to £649 ...	13%
B	£250 to £499 ...	20%	C	£225 to £399 ...	64%
C	£125 to £249 ...	60%	D	Under £225 ...	20%
D	Under £125 ...	15%			

<sup>1</sup> The household composition of the social classes is set out in Table 5.

<sup>2</sup> Paragraphs 36 *et seq.*

<sup>3</sup> "The People's Food", page 316.

17. Typical occupations representative of these different classes in the Surveys are as follows :

Crawford and Broadley			National Food Survey		
Class AA	£1,000 and over per annum	1 per cent of population	Class A Grade 1	£20 and over per week	1 per cent of population
<p><b>TYPICAL OCCUPATIONS—</b>            Factory owner, stock broker, banker, company director, established member of the professions, including highest grade of the Civil Service, landowner, large scale farmers, major executive in business.</p>			<p><b>TYPICAL OCCUPATIONS—</b>            Doctor, lawyer, accountant (partner), headmaster of public school, town clerk, company director, insurance manager, stock broker, factory or shop owner employing labour, manager of a large branch of a bank, civil servant in top grades of Civil Service.</p>		
Class A	£500 to £999 per annum	4 per cent of population	Class A Grade 2	£13 to £20 per week	2 per cent of population
<p><b>TYPICAL OCCUPATIONS—</b>            Owner of small factory or large retail shop, minor executive in business, manager or assistant manager, owner of small commercial concern, medium grade professional man, e.g. members of small architectural firms, medical general practitioners with small practices, upper grade civil servants.</p>			<p><b>TYPICAL OCCUPATIONS—</b>            Church of England Minister, journalist, surveyor, senior administrative worker in Civil Service or Local Government office, company secretary, accountant, owner of small business, factory or garage with small number of employees, manager of small branch office of bank or insurance company, shop owner.</p>		
Class B	£250 to £499 per annum	20 per cent of population	Class B	£8 to £13 per week	13 per cent of population
<p><b>TYPICAL OCCUPATIONS—</b>            Owner of small to medium-sized shop, owner of small workshop, younger members of professions, technical and managerial staff to business concerns, executive and higher clerical civil servant, bulk of middle-aged and older bank and insurance officials. Key workers in certain trades.</p>			<p><b>TYPICAL OCCUPATIONS—</b>            Bank clerk, civil servant in clerical grades, solicitor's clerk, dispenser, teacher, commercial traveller, manager of small retail shop, commercial assistant dental mechanic, compositor, scientific instrument maker, tailor's cutter, passenger locomotive driver, skilled engineer.</p>		
Class C	£125 to £249 per annum	60 per cent of population	Class C	£4 10s. to £8 per week	64 per cent of population
<p><b>TYPICAL OCCUPATIONS—</b>            Foremen in most trades, skilled workmen (e.g. printers, type-setters) and semi-skilled workmen in sheltered industries (L.P.T.B. employees, building trade and distributive trade workers), junior bank clerks, draughtsmen, secretaries and non-junior typists, lower grade and blackcoated workers generally, except for juniors, higher grade shop assistants, managers and assistant managers of small concerns, owners of very small retail shops, lower grade civil servants, office and works superintendents.</p>			<p><b>TYPICAL OCCUPATIONS—</b>            Building trades—brick-layers, painters, plumbers, fitters, masons, farm workers; shipyard workers—riggers, stagers, caulkers, riveters, welders; factory workers—bottlers, carriers, leather dressers, moulder and presser in brick works; metal workers; foundrymen, tool setters, press workers, riveters; mine and quarry workers, tailors' pressers and machinists, textile workers, postmen, policemen, firemen; transport—dock workers, railwaymen (except passenger locomotive drivers), bus drivers and conductors, carriers, clerical workers in less responsible positions, roundsmen and van salesmen; shop assistants, stagehands, barmen, waiters, library assistants and bakers (employed).</p>		

Crawford and Broadley			National Food Survey		
Class D	Under £125 per annum	15 per cent of population	Class D	Less than £4 10s. per week	20 per cent of population
<b>TYPICAL OCCUPATIONS—</b> Lowest grade office and warehouse clerical staff, semi-skilled and unskilled workers, e.g. cotton, coal-mining, building, semi-skilled in seasonal trades, unemployed and old age pensioners.			<b>TYPICAL OCCUPATIONS—</b> Casual workers subject to long periods of unemployment, casual labourers, lowest ranks of Armed Forces, pensioners, widows with pensions, the unemployed.		

### Household Composition

18. It is not a simple matter to classify households in such a way as to provide a manageable number of sufficiently homogeneous groups for the purpose of analysis, yet family composition is so important in determining food consumption levels that some system of classification has to be devised. The problem is illustrated by Table 5, which is based not on the usual National Food Survey data but on data collected at a special survey during September 1950. As this was a less complicated survey and produced a higher response rate, Table 5 probably gives a more representative picture than Table 4, which is a classification of the National Food Survey 1950 data by social class and household composition. Table 5 shows clearly that no one type of household predominates. For example, households with one man and one woman with one or two children (respectively 11 per cent and 9 per cent only of all households) cannot be considered to be typical. On the other hand, there is no simple classification that is exhaustive.

19. For the purpose of analysing the Survey data, it has been necessary to select certain groups of households only. Old age pensioner households have been treated separately, since these form a group of predominantly adult households with special characteristics. This group is discussed usually in connection with the social class analysis. But for examining the effects of family composition, it was decided to select all households having one male and female adult, and to make a comparison between households of this type having varying numbers of children. This group of two adult households represents over half of all households and five sevenths of all households with children. It is the largest homogeneous group and, in analysis, directs attention to the type of household with which nutritional policy is specially concerned.

**TABLE 4**  
**Number of Households and Persons and average size of households included in the National Food Survey 1950**  
**Classified by Social Class and Household Composition**

Social Class	Households with one man and one woman and										Other households		All households	%
	No. others	1 child	2 children	3 children	4 or more children	Adolescents	Children and adolescents	Total	with children	without children				
A	Households	42	15	8	2	10	13	105	21	26	152	8.2		
	Persons	84	45	60	12	31	67	339	103	50	522	9.1		
	Household size	2.0	3.0	4.0	6.0	3.1	5.1	3.2	4.9	3.1	3.4			
B (a)	Households	104	120	110	25	7	40	437	80	85	602	12.8		
	Persons	208	360	440	125	44	200	1,482	383	283	2,148	19.0		
	Household size	2.0	3.0	4.0	5.0	6.3	3.4	3.4	4.8	3.3	3.6			
C (b)	Households	376	482	429	135	98	251	1,932	389	395	2,716	57.5		
	Persons	752	1,446	1,716	775	637	1,363	7,143	2,077	1,339	10,559	68.7		
	Household size	2.0	3.0	4.0	5.0	6.5	3.2	3.7	5.3	3.4	3.9			
D (Excluding O.A.P. households)	Households	166	17	13	5	32	27	270	179	396	845	17.9		
	Persons	332	51	52	32	196	148	771	918	997	2,686	16.2		
	Household size	2.0	3.0	4.0	6.4	3.3	5.5	2.9	5.1	2.5	3.2			
All O.A.P. households	Households	171	3	—	—	—	1	178	4	226	408	8.6		
	Persons	342	9	—	—	—	4	367	13	291	671	4.0		
	Household size	2.0	3.0	—	—	—	4.0	2.1	3.2	1.3	1.6			
All Social Classes	Households	859	637	570	198	112	332	2,922	673	1,128	4,723	100		
	(Percentage)	18.2	13.5	12.1	4.2	2.4	7.0	61.9	14.2	23.9	100			
	Persons	1,718	1,911	2,280	990	725	1,782	10,182	3,494	2,990	16,586	100		
Household size	(Percentage)	10.4	11.5	13.8	6.0	4.4	10.7	60.9	21.1	18.0	100			
	Household size	2.0	3.0	4.0	5.0	6.5	3.4	3.5	5.2	2.7	3.5			

**Definitions:** Men and Women ... 21 years and over.  
 Adolescents ... 14 to 20 years.  
 Children ... under 14 years.  
 O.A.P. Households ... households dependent mainly or entirely on an old age pension or pensions.

(a) Excluding 1 O.A.P. household comprising 2 persons, which is here included with O.A.P. households.  
 (b) Excluding 6 O.A.P. households comprising 11 persons, which are here included with O.A.P. households.



**TABLE 5**  
**Household Composition of the Special Survey—September 1950**  
 (a) *Households with children*

	Households with 1 adult and		Households with 2 adults and						Households with 3 or more adults and				Total households with children			
	Children only	Children and adolescents	Total	1 child	2 children	3 children	4 or more children	1 child and 1 adolescent	Others	Total	1 child	2 children		3 or more children	Children and adolescents	Total
Number of households ...	52	22	74	458	371	154	70	98	174	1,325	166	77	32	120	395	1,794
Percentage of households with children ...	2.9	1.2	4.1	25.5	20.7	8.6	3.9	5.4	9.7	73.8	9.2	4.3	1.8	6.7	22.0	100.0
Percentage of all households ...	1.3	0.5	1.8	11.4	9.2	3.8	1.7	2.4	4.3	33.0	4.1	1.9	0.8	3.0	9.8	44.6

(b) *Households without children*

	Households with 1 adult		Households with 2 adults				Households with 3 or more adults					Total households without children		
	Old age pensioner households	Households with adolescents	Total	Old age pensioner households	Other households only	Households with adolescents	Total	Old age pensioner households (3 or more)	Other households with 3 adults	Other households with 4 or more adults	Households with adolescents		Total	
														Old age pensioner households
Number of households	119	229	26	374	112	865	185	1,162	15	363	167	143	668	2,224
Percentage of households without children	5.3	10.3	1.2	16.8	5.0	38.9	8.3	52.2	0.7	16.3	7.5	6.4	30.9	100.0
Percentage of all households ...	3.0	5.7	0.6	9.3	2.8	21.5	4.6	28.9	0.4	9.0	4.1	3.6	17.1	55.4

Definitions: *child*, under 14 years; *adolescent*, 14 to 20 years inclusive; *adult*, 21 years and over.

## APPENDIX B

### Index of Seasonal Price Changes

1. The index used to show the movements of prices in the second and subsequent Survey periods of 1950 is of the Laspeyres type. The prices of individual foods in the second and subsequent periods are expressed as percentages of the prices of the same foods in the first period, and weighted by expenditure in the first period, so that the resulting index number expresses the relative cost to the housewife in a particular period of a collection of foods similar to that bought in the first period of the same year.

2. The prices used are the average prices paid by the housewife for over 80 groups of foods. Shifts of expenditure from cheaper to more expensive foods within these groups affect the index in much the same way as a price increase for the whole group, and a shift to cheaper foods as a price decrease, so it is likely that the index in a period in which prices are rising faster than incomes may slightly underestimate the true price rise to the extent that housewives tend to meet rising prices by diverting their expenditure to cheaper items. The actual numbers of different food groups used in the calculation are :—

Milk	...	...	...	...	...	...	7
Cheese	...	...	...	...	...	...	2
Eggs	...	...	...	...	...	...	3
Meat	...	...	...	...	...	...	17
Fish	...	...	...	...	...	...	10
Fats, sugar, preserves	...	...	...	...	...	...	7
Cereals	...	...	...	...	...	...	15
Vegetables, other than fresh vegetables	...	...	...	...	...	...	5
Fruit, other than fresh fruit	...	...	...	...	...	...	8
Beverages and miscellaneous foods	...	...	...	...	...	...	8
							—
							82
							—

3. The inclusion in the index of such highly seasonal items as fresh fruit and fresh vegetables would be definitely misleading, even if it were possible to obtain reliable prices for all these items in the off seasons of the year, for the constitution of these groups changes from season to season in accordance with the supply situation. This factor also operates for many of the other items in the index, although to a much less degree. For this reason, the index must be regarded as not more than a convenient summary of the price movements in the more important food groups.

## APPENDIX C

### Comparison between the National Food Survey Data 1950 and those obtained by Orr and Crawford and Broadley before the War

1. The average household food consumption and expenditure revealed in the Surveys undertaken by Orr and Crawford and Broadley before the war may be compared with the records of the National Food Survey during 1950 provided that the differences in the structure of the samples and in the definitions used are kept in mind. The family budgets on which Orr based his analyses were collected at various dates between 1932 and 1935. " Their number was something less than 1,200. They included a relatively high proportion of families in the industrial north, of families with small incomes and large numbers of dependants. Moreover, they were not distributed seasonally throughout the year, but tended to be concentrated in the spring and early summer months. Family budgets for ' black-coated ' workers were

few ; those for the middle class were poorly represented and for the rich completely lacking . . . the actual quantities and values of the different items in one family dietary would no doubt be somewhat altered if a collection of family budgets thoroughly representative of the whole country were available."<sup>1</sup> These results were compared by Orr with national averages derived from supplies of food available for consumption, and where discrepancies occurred which could not be explained by the differences in the sources of the data, adjustments were made, particularly for meat, eggs, cheese, sugar, condensed milk and fish. The adjusted figures are those used below in the tables but it must be recognised that the process of adjustment which included for example an allowance for meals out, may not always have made the figures more comparable with those for 1950.

2. The budgetary enquiry of Crawford and Broadley also reflected primarily the winter and early spring (October 1936 to March 1937) and, so far as the urban sample was concerned, was limited to seven large towns. But nearly 5,000 budgets were collected and a fairly representative sample was obtained by a process of social class stratification depending mainly on the income of the head of the household.

### Domestic Food Expenditure

3. Orr records total household food expenditure as 9s. 0d. a head a week and Crawford and Broadley, 8s. 11½d. The National Food Survey figure for all households for 1950 was 14s. 10d.<sup>2</sup>, or an increase of two-thirds to three-quarters.

4. When examining changes in the expenditure on particular foods differences in the sample structure and in grouping the foods are of greater importance. Nevertheless, the general change in the pattern of the diet since before the war is strikingly illustrated by the following tables. The percentage of total food expenditure attributable to meat and fats fell slightly, but the percentages for cereals, milk and vegetables showed marked increases.

TABLE 1

### Estimated Domestic Food Expenditure 1950 compared with before the war

#### A. Meat and Fish

*d. per head per week*

	Orr	Crawford and Broadley	National Food Survey 1950
Beef, veal, mutton and lamb	16·8	13·6	19·5 (e)
Bacon ... ..	5·5 (a)	4·3	7·9
		Pork, ham and pork sausage	
Other meat ... ..	6·6 (b)	3·2	14·0 (f)
		5·8 (d)	
All meat ... ..	28·9	26·9	41·4
Percentage of total food expenditure ... ..	27%	25%	23%
Fish ... ..	5·0 (c)	5·2	8·2
Percentage of total food expenditure ... ..	5%	5%	5%

(a) Includes ham.

(b) Sausage, corned beef and pork only.

(c) Includes fried fish consumed in the home and fish products.

(d) Offal, rabbit, poultry, sausages, prepared and tinned meat.

(e) Rationed fresh meat, including a small quantity of pork.

(f) Offal, poultry, cooked and canned meat, sausages and other meat products.

<sup>1</sup> *Food, Health and Income*, 1936, pages 68-69.

<sup>2</sup> 16s. 0d. if stock withdrawals are taken into account.

**B. Cereals and Cereal Products**

	Orr	Crawford and Broadley	National Food Survey 1950
Bread and flour ... ..	13.2	10.2	14.4
Cakes and biscuits ... ..		2.0	14.1
Other cereal products ... ..	(a)	2.3 (b)	4.8 (c)
<b>Total ...</b>	<b>13.2</b>	<b>14.5</b>	<b>33.3</b>
<b>Percentage of total food expenditure</b>	<b>12%</b>	<b>14%</b>	<b>19%</b>

- (a) Not given.  
 (b) Rice, sago, etc., breakfast cereals, custard powder.  
 (c) Puddings, oatmeal, breakfast cereals, rice, barley, etc.

**C. Milk Products, Fats and Eggs**

	Orr	Crawford and Broadley	National Food Survey 1950
Fresh milk ... ..	9.8	10.2	19.6 (b)
Condensed milk ... ..	1.0	0.9	1.8 (c)
Eggs ... ..	3.8	6.4	9.3 (d)
Cheese ... ..	1.8	1.7	2.6 (e)
<b>Total ...</b>	<b>16.4</b>	<b>19.2</b>	<b>33.3</b>
<b>Percentage of total food expenditure</b>	<b>15%</b>	<b>18%</b>	<b>19%</b>
Butter ... ..	6.2	6.5	5.6
Margarine ... ..	1.0	0.9	2.3
Cooking fat ... ..	1.9 (a)	1.2	2.2 (e)
<b>Total ...</b>	<b>9.1</b>	<b>8.6</b>	<b>10.1</b>
<b>Percentage of total food expenditure</b>	<b>8%</b>	<b>8%</b>	<b>6%</b>

- (a) Lard, suet and dripping only.  
 (b) Full price and welfare.  
 (c) Including dried milk.  
 (d) Shell.  
 (e) Rationed and unrationed.

**D. Fruit and Vegetables**

	Orr	Crawford and Broadley	National Food Survey 1950
Potatoes ... ..	3.0	4.2	6.4
Other vegetables ... ..	4.6	3.8	Chips and crisps 1.4
Fruit ... ..	9.0	7.1	14.9 (a)
<b>Total ...</b>	<b>16.6</b>	<b>15.1</b>	<b>32.7</b>
<b>Percentage of total food expenditure</b>	<b>15%</b>	<b>14%</b>	<b>18%</b>

- (a) Includes tomatoes.

*E. Sugar, Preserves, Tea and Miscellaneous Items*

	Orr	Crawford and Broadley	National Food Survey 1950
Sugar ... ..	2.7	2.6	3.1
Preserves, including syrup ... ..	1.8 (a)	2.2	4.7
<b>Total ...</b>	<b>4.5</b>	<b>4.8</b>	<b>7.8</b>
<b>Percentage of total food expenditure</b>	<b>4%</b>	<b>5%</b>	<b>4%</b>
Tea ... ..	4.2	5.4	5.4
<b>Percentage of total food expenditure</b>	<b>4%</b>	<b>5%</b>	<b>3%</b>
Miscellaneous ... ..	10.1	7.8	5.7

(a) Includes jellies.

**Domestic Food Consumption**

5. It is particularly important to determine how far the difference between pre-war expenditure and that of 1950 represented differences in the quantities of food consumed but the latter comparison requires even greater caution than that of expenditure. The Crawford and Broadley Survey, for example, recorded the purchases of potatoes at a time of year when their consumption is always at a maximum. The National Food Survey estimates for "consumption" are moreover obtained by allowing for changes in household stocks and for food received from gardens or as gifts; the data provided by Crawford and Broadley relate only to purchases by the family in the course of the Survey week. The comparison shown in the following tables probably indicates with reasonable accuracy the general nature of the changes in the average diet. The principal foods of which the consumption was lower in 1950 than before the war are meat, fish, fats, sugar and cheese. But the consumption of milk was higher by about one half and, if allowance is made for the possible over-estimate of potato consumption by Crawford and Broadley, that of potatoes was also higher.

**TABLE 2**

**Estimated Domestic Food Consumption: 1950 compared with before the War**

*A. Meat and Fish*

*oz. per head per week except where otherwise stated*

	Orr	Crawford and Broadley	National Food Survey 1950
Beef, veal, mutton and lamb...	25.4	18.7	13.8 (f)
Bacon ... ..	7.0 (a)	Pork, ham and pork sausage 4.8 3.6	4.5
Other meat ... ..	5.8 (b)	9.3 (d)	11.6 (g)
All meat ... ..	38.2	36.4	29.9
Fish ... ..	8.9 (c)	6.8 (e)	6.6 (e)

(a) Includes ham.

(b) Sausage, corned beef and pork only.

(c) Excludes fried and tinned.

(d) Offal, rabbit, poultry, sausages, prepared and tinned meat.

(e) Includes all fried fish consumed in the home.

(f) Rationed fresh meat including a small quantity of pork.

(g) Offal, poultry, cooked and canned meat, sausages and other meat products.

**B. Cereals and Cereal Products**

	Orr	Crawford and Broadley	National Food Survey 1950
Bread and flour (a) ... ..	60.1	55.9	51.7 (c)
Rice, sago, etc. ... ..	(b)	3.6	6.3 (d)
Total ... ..	—	59.5	58.0

(a) In terms of flour : 130 bread = 100 flour.

(b) Not given.

(c) Includes sandwiches and fruit bread.

(d) Cereal products, puddings, oatmeal.

**C. Milk Products, Fats and Eggs**

	Orr	Crawford and Broadley	National Food Survey 1950
Fresh milk (pt.) ... ..	3.1	2.9	4.8 (c)
Condensed milk (eq. pt.) ... ..	0.5	0.3	0.4 (d)
Eggs (No.) ... ..	2.9	4.1 (b)	3.5 (e)
Cheese ... ..	3.0	2.7	2.5 (f)
Butter ... ..	7.8	7.6	4.6
Margarine ... ..	2.5	2.4	3.9
Cooking fats ... ..	3.9 (a)	2.6	3.1 (f)
All fats ... ..	14.2	12.6	11.6

(a) Lard, suet and dripping.

(b) " During the period of the present Food Enquiry, English egg-producers were marketing unusually large quantities." *The People's Food*, page 193.

(c) Full price and welfare milk.

(d) Including dried milk.

(e) Shell eggs.

(f) Rationed and unrationed.

**D. Fruit and Vegetables**

	Orr	Crawford and Broadley	National Food Survey 1950
Potatoes ... ..	56.0	62.6	62.0 Chips and crisps 2.1
Other vegetables ... ..	27.0 (a)	—	34.5 (c)
Fruit ... ..	26.5 (a)	1.9 (b)	18.1

(a) " Group quantities for fruit and vegetables have been estimated from expenditure after allowing for quality variations, but the figures are subject to a wide margin of error." *Food, Health and Income*, page 66 footnote.

(b) Dried fruit only.

(c) Includes tomatoes.

**E. Sugar, Preserves and Tea**

	Orr	Crawford and Broadley	National Food Survey 1950
Sugar ... ..	17.8	16.7	10.1
Preserves and syrup ... ..	5.2 (a)	5.6	6.3
Tea ... ..	2.8	3.4	2.2

(a) Includes jellies.

### Social class differences

6. Change in national averages may also be deduced from the statistics of supplies of food moving into civilian consumption<sup>1</sup> but budgetary data must be used to discover the changes in social class differences, whether of food expenditure or consumption, which have taken place since before the war. Unfortunately it is at this point that comparisons are least reliable. Orr analysed the data on the basis of income groups and not social class. He also had available too few budgets, particularly at the upper levels, to measure group differences although the broad curve of change may give an adequate picture for the greater part of the population.

7. Crawford and Broadley had a large sample to draw upon and analysed their data according to social class. But their information is based mainly on the winter months and there are known to be significant seasonal changes in class differences: those with higher incomes are able, for example, to buy more of the expensive vegetables during the winter months. If comparison is made with the figures for the earlier months only of 1950, this difficulty is minimised. Of greater moment is the different structure of the social classes in 1950 compared with 1936-1937 when measured primarily by head of household income. As a result, the comparison between the two sets of data is a limited guide only to the fortune of any particular group of households, such as Crawford and Broadley's social Class D. For, with the general levelling of head of household incomes, a number of households which were to be found in this class before the war may still be in the lowest class although when total family incomes are taken into account their economic position, and with it their social conditions, may have considerably improved. What the comparison of social classes does indicate are the differences in the diets at the two dates of the upper 4 to 5 per cent and the lowest 15 to 20 per cent of the population and how the diet at these extremes compares with that of the large group in between. Over a shorter period, and under more stable conditions, such a comparison could be applied more closely to particular household groups, and for these reasons a closer comparison will be possible when the data for 1951 and later years are set against those for 1950.

8. The social class comparisons are made, using the pre-war data where appropriate, in the text and detailed tables are not reproduced here.

## APPENDIX D

### National Food Survey

#### I—Food Consumption by all Households 1950

*oz. per head per week (except where otherwise stated)*

	Jan.-Feb.	Apr.-May	July-Aug.	Oct.-Nov.	Annual average
<b>MILK</b>					
Liquid retail (pt.) ... ..	3·76	3·80	3·78	3·69	3·76
Liquid welfare (pt.) ... ..	1·03	1·08	0·97	1·01	1·02
Skimmed (pt.) ... ..	...	...	—	—	—
Skim, cond. sweet (eq. pt.) ...	0·07	0·10	0·05	0·07	0·07
Whole, cond. (eq. pt.) ... ..	0·15	0·16	0·17	0·18	0·16
Whole dried (eq. pt.) ... ..	0·14	0·18	0·16	0·14	0·16
<b>Total milk</b> ... ..	<b>5·15</b>	<b>5·32</b>	<b>5·13</b>	<b>5·09</b>	<b>5·17</b>

<sup>1</sup> See Food Consumption Levels in United Kingdom, 1949. H.M.S.O. Cmd. 7842, and Ministry of Food Bulletin No. 632, 1952.

I—Food Consumption by all Households 1950—cont.

oz. per head per week (except where otherwise stated)

	Jan.-Feb.	Apr.-May	July-Aug.	Oct.-Nov.	Annual average
Cream ... ..	0-06	...	0-06	0-02	0-04
Cheese—rationed ... ..	2-45	2-39	2-30	2-28	2-36
Cheese—other ... ..	0-12	0-17	0-18	0-26	0-18
<b>MEAT</b>					
Beef—roasting, etc. ... ..	5-12	5-99	5-94	5-66	5-68
Beef—stewing ... ..	2-11	2-26	2-20	2-36	2-23
Veal ... ..	0-08	0-10	0-09	0-34	0-15
Mutton and lamb—roasting, etc. ... ..	6-01	4-71	4-31	5-05	5-02
Mutton and lamb—stewing... ..	0-46	0-32	0-30	0-57	0-41
Pork ... ..	0-36	0-57	0-20	0-08	0-30
Bones ... ..	0-79	0-55	0-30	0-75	0-60
Corned beef ... ..	0-02	0-01	2-10	0-10	0-56
Bacon ... ..	4-76	4-64	5-09	3-58	4-52
Liver ... ..	0-42	0-47	0-53	0-41	0-46
Other offals ... ..	0-74	0-76	0-52	0-95	0-74
Poultry ... ..	0-46	0-21	0-33	0-39	0-35
Rabbit, etc. ... ..	1-57	0-55	0-50	1-84	1-12
Cooked meat ... ..	0-47	0-60	0-54	0-69	0-57
Canned meat ... ..	0-72	1-03	1-45	1-53	1-18
Sausages ... ..	4-18	4-34	3-20	4-31	4-01
Other meat products ... ..	2-22	1-73	1-67	2-19	1-95
<b>Total meat</b> ... ..	<b>30-49</b>	<b>28-84</b>	<b>29-27</b>	<b>30-80</b>	<b>29-85</b>
<b>FISH</b>					
White fish—fresh cheap ... ..	2-68	2-45	2-24	2-22	2-40
White fish—fresh expensive... ..	0-73	0-83	0-68	0-69	0-73
White fish—processed ... ..	0-86	0-76	0-41	0-57	0-65
Fat fish—fresh ... ..	0-59	0-32	0-50	0-84	0-56
Fat fish—processed ... ..	0-79	0-32	0-56	0-78	0-61
Fish in shell—cheap... ..	0-07	0-02	0-03	0-21	0-08
Fish in shell—expensive ... ..	0-03	0-06	0-03	0-02	0-04
Fish—cooked... ..	0-99	0-82	1-10	1-19	1-02
Fish—canned and bottled ... ..	0-53	0-46	0-38	0-37	0-44
Fish—manufactured ... ..	0-09	0-08	0-06	0-13	0-09
<b>Total fish</b> ... ..	<b>7-36</b>	<b>6-12</b>	<b>5-99</b>	<b>7-02</b>	<b>6-62</b>
<b>EGGS</b>					
Shell (No.) ... ..	3-07	5-00	3-74	2-05	3-46
Dried ... ..	0-08	0-02	0-02	0-03	0-04
<b>FATS</b>					
Butter ... ..	4-30	4-61	5-16	4-19	4-56
Margarine ... ..	4-01	3-94	3-76	4-03	3-94
Cooking fats—rationed ... ..	2-01	1-97	1-99	1-88	1-96
Other fats ... ..	1-18	1-07	0-97	1-36	1-15
<b>Total fats</b> ... ..	<b>11-50</b>	<b>11-59</b>	<b>11-88</b>	<b>11-46</b>	<b>11-61</b>
<b>SUGAR AND PRESERVES</b>					
Sugar ... ..	9-96	9-82	11-11	9-61	10-13
Preserves ... ..	4-93	5-09	4-58	4-76	4-84
Syrup and treacle ... ..	1-49	1-55	1-30	1-51	1-46
<b>Total sugar and preserves</b>	<b>16-38</b>	<b>16-46</b>	<b>16-99</b>	<b>15-88</b>	<b>16-43</b>



I—Food Consumption by all Households 1950—cont.

oz. per head per week (except where otherwise stated)

	Jan.—Feb.	Apr.—May	July—Aug.	Oct.—Nov.	Annual average
<b>VEGETABLES</b>					
Potatoes ... ..	66.49	64.38	54.06	63.23	62.04
Chips and crisps ... ..	2.19	1.89	2.20	2.21	2.12
Carrots ... ..	3.42	1.08	2.50	4.06	2.76
Other roots ... ..	3.69	1.76	1.53	4.38	2.84
Cabbage types ... ..	5.01	4.95	5.41	5.86	5.31
Brussels sprouts ... ..	2.59	—	0.05	4.38	1.76
Cauliflower ... ..	1.59	3.00	1.42	2.41	2.11
Other green vegetables ... ..	0.10	0.49	0.15	0.10	0.21
Leafy salads ... ..	0.24	1.27	2.54	0.32	1.09
Onions, etc. ... ..	4.40	3.32	2.65	4.17	3.63
Miscellaneous fresh vegetables	0.55	0.85	2.29	1.40	1.27
Fresh legumes ... ..	0.08	0.14	12.84	0.25	3.33
Dried pulses ... ..	1.00	0.94	0.43	0.83	0.80
Canned pulses ... ..	4.39	5.53	2.99	4.16	4.27
Other canned vegetables ... ..	0.32	0.57	0.11	0.12	0.28
Vegetable products ... ..	0.10	0.12	0.04	0.07	0.08
<b>Total vegetables</b> ... ..	<b>96.16</b>	<b>90.29</b>	<b>91.21</b>	<b>97.95</b>	<b>93.90</b>
<b>FRUIT</b>					
Tomatoes ... ..	2.79	3.56	7.98	4.78	4.78
Citrus fruit ... ..	5.64	2.24	2.47	2.73	3.27
Apples and pears ... ..	7.97	3.63	6.64	10.13	7.09
Stone fruit ... ..	0.08	0.13	2.69	(0.004)	0.73
Soft fruit ... ..	0.09	0.24	2.92	0.52	0.94
Bananas ... ..	1.48	0.74	1.17	1.76	1.29
Other fresh fruit ... ..	0.32	2.80	1.21	0.03	1.09
Bottled fruit ... ..	1.47	0.89	0.26	0.65	0.82
Canned fruit ... ..	1.29	1.25	1.01	1.02	1.14
Fruit juice ... ..	0.23	0.33	0.23	0.21	0.25
Dried vine fruit ... ..	0.61	0.61	0.67	0.51	0.60
Other dried fruit ... ..	0.56	0.55	0.43	0.39	0.48
Nuts ... ..	0.20	0.05	0.03	0.12	0.10
Fruit and nut products ... ..	0.31	0.08	0.19	0.59	0.29
<b>Total fruit and nuts</b> ... ..	<b>23.04</b>	<b>17.10</b>	<b>27.90</b>	<b>23.44</b>	<b>22.87</b>
<b>CEREALS</b>					
Flour ... ..	7.21	7.11	7.78	6.88	7.25
National bread ... ..	50.96	52.17	50.38	50.13	50.91
Rolls, etc. ... ..	2.18	2.27	1.67	2.13	2.06
Other bread ... ..	2.42	2.35	2.81	2.61	2.55
Sandwiches ... ..	0.04	0.04	0.05	0.04	0.04
Fruit bread ... ..	2.10	2.26	2.11	2.30	2.19
Biscuits ... ..	3.22	3.54	3.99	3.96	3.68
Small cakes ... ..	3.01	3.04	2.83	3.44	3.08
Large cakes ... ..	4.04	3.55	3.33	3.53	3.61
Puddings ... ..	1.45	1.01	1.00	0.87	1.09
Oatmeal and oat products ... ..	1.68	1.30	0.81	1.50	1.32
Breakfast cereals ... ..	1.26	1.38	1.47	1.47	1.40
Rice and barley ... ..	0.95	0.87	0.72	0.89	0.86
Cereals—flour base ... ..	1.08	1.05	0.78	0.88	0.95
Other cereals ... ..	0.67	0.70	0.72	0.62	0.68
<b>Total cereals</b> ... ..	<b>82.27</b>	<b>82.64</b>	<b>80.45</b>	<b>81.25</b>	<b>81.67</b>
<b>BEVERAGES</b>					
Cocoa and cocoa drinks ... ..	0.39	0.35	0.28	0.37	0.35
Tea ... ..	2.21	2.24	2.15	2.04	2.16
Coffee—bean and ground ... ..	0.17	0.12	0.14	0.17	0.15
Coffee—essences ... ..	0.06	0.05	0.05	0.08	0.06
<b>Total beverages</b> ... ..	<b>2.83</b>	<b>2.76</b>	<b>2.62</b>	<b>2.66</b>	<b>2.72</b>

## I—Food Consumption by all Households 1950—cont.

*oz. per head per week (except where otherwise stated)*

	Jan.-Feb.	Apr.-May	July-Aug.	Oct.-Nov.	Annual average
<b>MISCELLANEOUS</b>					
Salad dressings and sweet spreads ... ..	0-05	0-12	0-16	0-05	0-10
Patent drinks and foods ...	0-16	0-12	0-12	0-12	0-13
Fish oil (welfare) (fl. oz.) ...	0-06	0-04	0-03	0-03	0-04
Vitamin concentrates (No.)...	0-02	0-03	0-02	0-02	0-02
Soups and extracts ... ..	1-76	1-13	0-87	1-46	1-31
<b>Total miscellaneous ...</b>	<b>2-05</b>	<b>1-44</b>	<b>1-20</b>	<b>1-68</b>	<b>1-60</b>

## National Food Survey

### II—Food Expenditure by all Households 1950

*d. per head per week*

	Jan.-Feb.	Apr.-May	July-Aug.	Oct.-Nov.	Annual average
<b>MILK</b>					
Liquid retail ... ..	18-15	18-36	18-18	17-93	18-16
Liquid welfare ... ..	1-40	1-46	1-44	1-36	1-42
Skimmed ... ..	(0-002)	—	—	(0-003)	(0-001)
Skim, cond. sweet ... ..	0-36	0-49	0-27	0-36	0-37
Whole, cond. ... ..	0-93	1-04	1-03	1-12	1-03
Whole, dried ... ..	0-41	0-46	0-38	0-37	0-41
<b>Total milk ... ..</b>	<b>21-25</b>	<b>21-81</b>	<b>21-30</b>	<b>21-14</b>	<b>21-38</b>
<b>Cream ... ..</b>	<b>—</b>	<b>—</b>	<b>0-03</b>	<b>(0-003)</b>	<b>0-01</b>
<b>Cheese—rationed ... ..</b>	<b>2-06</b>	<b>2-10</b>	<b>2-03</b>	<b>1-96</b>	<b>2-04</b>
<b>Cheese—other ... ..</b>	<b>0-43</b>	<b>0-59</b>	<b>0-52</b>	<b>0-83</b>	<b>0-59</b>
<b>MEAT</b>					
Beef—roasting, etc. ... ..	7-35	8-72	8-93	8-28	8-32
Beef—stewing ... ..	2-77	3-16	2-90	3-19	3-00
Veal ... ..	0-11	0-15	0-13	0-47	0-22
Mutton and lamb roasting, etc. ... ..	8-37	6-63	6-21	7-42	7-16
Mutton and lamb—stewing...	0-40	0-24	0-29	0-54	0-37
Pork ... ..	0-41	0-88	0-31	0-10	0-42
Bones ... ..	0-12	0-07	0-05	0-10	0-09
Corned beef ... ..	—	—	2-76	0-04	0-70
Bacon ... ..	8-01	7-78	9-20	6-77	7-94
Liver ... ..	0-61	0-71	0-76	0-60	0-67
Other offals ... ..	0-70	0-78	0-53	0-80	0-70
Poultry ... ..	0-58	0-33	0-27	0-76	0-49
Rabbits, etc. ... ..	1-37	0-50	0-27	1-76	0-98
Cooked meat ... ..	0-91	1-17	1-29	2-33	1-43
Canned meat ... ..	1-46	2-11	2-90	3-16	2-41
Sausages ... ..	4-46	4-59	3-42	4-72	4-30
Other meat products ... ..	2-48	1-95	1-80	2-62	2-21
<b>Total meat ... ..</b>	<b>40-11</b>	<b>39-77</b>	<b>42-02</b>	<b>43-56</b>	<b>41-41</b>

II—Food Expenditure by all Households 1950—cont.

d. per head per week

	Jan.-Feb.	Apr.-May	July-Aug.	Oct.-Nov.	Annual average
<b>FISH</b>					
White fish—fresh, cheap ...	2-69	2-60	2-49	2-67	2-61
White fish—fresh expensive...	1-08	1-18	1-08	1-20	1-14
White fish—processed ...	0-94	0-79	0-43	0-72	0-72
Fat fish—fresh ...	0-33	0-19	0-28	0-55	0-34
Fat fish—processed ...	0-53	0-23	0-38	0-55	0-42
Fish in shell—cheap ...	0-04	0-02	0-01	0-11	0-05
Fish in shell—expensive ...	0-05	0-07	0-06	0-02	0-05
Fish—cooked... ..	1-82	1-48	1-96	2-16	1-86
Fish—canned and bottled ...	1-07	0-90	0-83	0-70	0-88
Fish—manufactured ...	0-18	0-18	0-13	0-25	0-19
<b>Total fish ...</b>	<b>8-73</b>	<b>7-64</b>	<b>7-65</b>	<b>8-93</b>	<b>8-24</b>
<b>EGGS</b>					
Shell ... ..	8-68	13-31	9-32	5-88	9-29
Dried ... ..	0-43	0-04	0-06	0-13	0-17
<b>Total eggs ...</b>	<b>9-11</b>	<b>13-35</b>	<b>9-38</b>	<b>6-01</b>	<b>9-46</b>
<b>FATS</b>					
Butter ... ..	4-48	5-60	6-56	5-93	5-64
Margarine ... ..	2-36	2-35	2-29	2-37	2-34
Cooking fats—rationed ...	1-45	1-43	1-37	1-39	1-41
Other fats ... ..	0-90	0-70	0-48	1-03	0-78
<b>Total fats ...</b>	<b>9-19</b>	<b>10-08</b>	<b>10-70</b>	<b>10-72</b>	<b>10-17</b>
<b>SUGAR AND PRESERVES</b>					
Sugar ... ..	2-99	3-16	3-51	2-73	3-10
Preserves ... ..	3-65	4-11	3-60	3-77	3-78
Syrup and treacle ... ..	0-92	0-98	0-73	0-97	0-90
<b>Total sugar and preserves</b>	<b>7-56</b>	<b>8-25</b>	<b>7-84</b>	<b>7-47</b>	<b>7-78</b>
<b>VEGETABLES</b>					
Potatoes ... ..	6-07	7-93	6-36	5-22	6-40
Chips and crisps ... ..	1-37	1-27	1-57	1-50	1-43
Carrots ... ..	0-45	0-56	0-51	0-60	0-53
Other roots ... ..	0-58	0-41	0-28	0-57	0-46
Cabbage types ... ..	1-72	2-35	0-79	0-62	1-37
Brussels sprouts ... ..	1-21	—	0-02	1-36	0-65
Cauliflower ... ..	1-01	1-43	0-48	0-77	0-92
Other green vegetables ...	0-02	0-06	0-01	0-02	0-03
Leafy salads ... ..	0-42	1-60	0-72	0-32	0-77
Onions, etc. ... ..	1-34	1-48	0-77	1-00	1-15
Miscellaneous fresh vegetables	0-44	1-06	0-83	0-67	0-75
Fresh legumes ... ..	0-06	0-12	2-50	0-10	0-70
Dried pulses ... ..	0-67	0-65	0-33	0-58	0-56
Canned pulses ... ..	2-84	3-35	1-91	2-69	2-70
Other canned vegetables ...	0-23	0-40	0-06	0-10	0-20
Vegetable products ... ..	0-08	0-11	0-03	0-06	0-07
<b>Total vegetables ...</b>	<b>18-51</b>	<b>22-78</b>	<b>17-17</b>	<b>16-18</b>	<b>18-67</b>
<b>FRUIT</b>					
Tomatoes ... ..	2-44	3-92	6-62	3-49	4-12
Citrus fruit ... ..	2-52	1-24	1-50	1-52	1-70
Apples and pears ... ..	3-23	2-16	2-76	4-07	3-06
Stone fruit ... ..	0-12	0-13	1-70	(0-002)	0-49
Soft fruit ... ..	0-14	0-33	1-89	0-51	0-72
Bananas ... ..	0-96	0-47	0-86	1-22	0-88

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## II—Food Expenditure by all Households 1950—cont.

*d. per head per week*

	Jan.-Feb.	Apr.-May	July-Aug.	Oct.-Nov.	Annual average
<b>FRUIT—cont.</b>					
Other fresh fruit ... ..	0-18	0-46	0-08	0-01	0-18
Bottled fruit ... ..	0-05	0-04	0-05	0-20	0-09
Canned fruit ... ..	0-72	1-11	1-19	1-15	1-04
Fruit juice ... ..	0-26	0-25	0-19	0-15	0-20
Dried vine fruit ... ..	0-32	0-41	0-52	0-72	0-49
Other dried fruit ... ..	0-45	0-39	0-28	0-29	0-35
Nuts ... ..	0-24	0-11	0-08	0-32	0-19
Fruit and nut products ... ..	0-25	0-16	0-62	1-28	0-58
<b>Total fruit and nuts ... ..</b>	<b>11-82</b>	<b>11-18</b>	<b>18-34</b>	<b>14-93</b>	<b>14-07</b>
<b>CEREALS</b>					
Flour ... ..	1-93	1-80	2-01	1-78	1-88
National bread ... ..	10-24	10-59	10-26	10-26	10-34
Rolls, etc. ... ..	1-19	1-11	0-85	1-12	1-07
Other bread ... ..	0-67	0-68	0-79	0-71	0-71
Sandwiches ... ..	0-05	0-05	0-07	0-06	0-06
Fruit bread ... ..	1-45	1-57	1-55	1-58	1-54
Biscuits ... ..	3-98	4-55	4-86	5-16	4-64
Small cakes ... ..	4-04	4-27	4-23	5-09	4-41
Large cakes ... ..	3-65	4-28	3-40	4-15	3-87
Puddings ... ..	0-95	1-08	1-22	1-09	1-09
Oatmeal and oat products ... ..	0-80	0-65	0-43	0-79	0-67
Breakfast cereals ... ..	1-08	1-34	1-38	1-38	1-30
Rice and barley ... ..	0-55	0-54	0-39	0-50	0-50
Cereals—flour base ... ..	0-69	0-70	0-58	0-66	0-66
Other cereals ... ..	0-54	0-65	0-71	0-63	0-63
<b>Total cereals ... ..</b>	<b>31-81</b>	<b>33-86</b>	<b>32-73</b>	<b>34-96</b>	<b>33-34</b>
<b>BEVERAGES</b>					
Cocoa and cocoa drinks ... ..	0-84	0-71	0-63	0-81	0-75
Tea ... ..	5-54	5-95	4-94	5-00	5-36
Coffee—bean and ground ... ..	0-32	0-22	0-33	0-42	0-32
Coffee—essences ... ..	0-33	0-23	0-30	0-48	0-34
<b>Total beverages ... ..</b>	<b>7-03</b>	<b>7-11</b>	<b>6-20</b>	<b>6-71</b>	<b>6-77</b>
<b>MISCELLANEOUS</b>					
Salad dressings and sweet spreads ... ..	0-15	0-26	0-33	0-10	0-21
Patent drinks and foods ... ..	0-29	0-26	0-21	0-30	0-27
Soups and extracts ... ..	1-58	1-10	0-81	1-45	1-24
<b>Total miscellaneous ... ..</b>	<b>2-02</b>	<b>1-62</b>	<b>1-35</b>	<b>1-85</b>	<b>1-71</b>
<b>Miscellaneous items (expenditure only) ... ..</b>	<b>1-92</b>	<b>1-96</b>	<b>1-86</b>	<b>2-06</b>	<b>1-95</b>
<b>Expenditure on all foods ... ..</b>	<b>172-0</b> <b>(14s. 4d.)</b>	<b>182-0</b> <b>(15s. 2d.)</b>	<b>179-0</b> <b>(14s. 11d.)</b>	<b>177-0</b> <b>(14s. 9d.)</b>	<b>178-0</b> <b>(14s. 10d.)</b>
<b>Expenditure including stock withdrawals ... ..</b>	<b>16s. 0d.</b>	<b>16s. 0d.</b>	<b>15s. 11d.</b>	<b>16s. 0d.</b>	<b>16s. 0d.</b>

# APPENDIX E

## The National Food Survey

### Food Expenditure and Consumption by Urban Working-Class Households 1950

	Consumption	Expenditure
	oz. per head unless otherwise stated	d. per head per week
Liquid milk ... ..	(pt.) 4·6	19·4
Condensed and dried milk ... ..	(pt.) 0·4	1·9
<b>All milk ... ..</b>	<b>5·0</b>	<b>21·3</b>
<b>Cheese (a) ... ..</b>	<b>2·4</b>	<b>2·4</b>
<b>Rationed meat (excluding corned beef) ... ..</b>	<b>13·8</b>	<b>19·6</b>
Corned beef ... ..	0·5	0·7
Canned meats (b) ... ..	1·2	2·4
Sausages ... ..	4·0	4·3
Miscellaneous meats (c) ... ..	3·2	4·4
Bacon ... ..	4·5	8·1
<b>All meats (d) ... ..</b>	<b>27·2</b>	<b>39·5</b>
<b>Fish (other than canned) ... ..</b>	<b>6·3</b>	<b>7·3</b>
Canned fish ... ..	0·4	0·8
<b>All fish (e) ... ..</b>	<b>6·7</b>	<b>8·1</b>
Eggs, shell ... ..	(No.) 3·3	9·8
Eggs, dried ... ..	(No.) 0·1	0·2
<b>All eggs ... ..</b>	<b>3·4</b>	<b>10·0</b>
Butter ... ..	4·5	5·6
Margarine ... ..	3·9	2·4
Cooking fats, rationed ... ..	2·0	1·4
Other fats, including suet and dripping ... ..	1·1	0·8
<b>All fats ... ..</b>	<b>11·5</b>	<b>10·2</b>
Tomatoes ... ..	4·7	4·2
Other fresh fruit ... ..	13·3	6·8
Canned and bottled fruit (f) ... ..	1·8	1·2
Dried fruit and nuts ... ..	1·0	0·9
<b>All fruits (g) ... ..</b>	<b>20·8</b>	<b>13·1</b>
Potatoes ... ..	63·3	7·2
Chips and crisps ... ..	2·5	1·6
Fresh green vegetables ... ..	10·0	4·0
Fresh peas and beans ... ..	3·1	0·8
Carrots ... ..	2·6	0·5
Other root vegetables, and miscellaneous fresh vegetables ... ..	7·4	2·4
Canned and dried vegetables ... ..	5·6	3·6
<b>All vegetables (h) ... ..</b>	<b>94·5</b>	<b>20·1</b>

**Food Expenditure and Consumption, etc.—cont.**

	Consumption	Expenditure
	oz. per head unless otherwise stated	d. per head per week
Bread ( <i>j</i> ) ... ..	56.3	12.6
Flour ... ..	6.5	1.7
Biscuits ( <i>j</i> ) ... ..	3.6	4.5
Cakes, buns and scones ... ..	9.1	10.5
Oatmeal and oatmeal products... ..	1.2	0.6
Breakfast cereals ... ..	1.4	1.2
Other cereal foods ( <i>k</i> ) ... ..	2.4	1.8
<b>All cereal foods</b> ... ..	<b>80.5</b>	<b>32.9</b>
Cocoa ... ..	0.3	0.7
Tea ... ..	2.2	5.3
Coffee ... ..	0.2	0.5
<b>All beverages</b> ... ..	<b>2.7</b>	<b>6.5</b>
Sugar ... ..	10.2	3.1
Preserves (including syrup and treacle) ... ..	5.7	4.5
Other foods ... ..		6.4
<b>Total</b> ... ..		<b>178.1</b>

- (a) Includes non-rationed cheese.
- (b) Includes prepared meats.
- (c) Offals, rabbits, poultry, game and cooked meats.
- (d) Includes meat products and bones.
- (e) Excludes fish products.
- (f) Includes fruit juices.
- (g) Excludes fruit and nut products.
- (h) Excludes vegetable products.
- (i) Includes rolls, breadcrumbs, currant and malt bread, muffins and crumpets.
- (j) Includes rusks and crispbread.
- (k) Includes rice, sago, tapioca, cornflour, and custard powder.

## APPENDIX F

### Nutrient requirements based on British Medical Association Recommendations 1950 used in National Food Survey

Category	Calories	Protein	Calcium	Iron	Vitamin A	Vitamin B <sub>1</sub>	Riboflavin	Nicotinic Acid	Vitamin C
		g.	g.	mg.	i.u.	mg.	mg.	mg.	mg.
<i>Man</i>									
Over 65 years ...	2,250	62	0.8	12	2,500	0.9	1.4	9	20
Sedentary ...	2,500	69	0.8	12	2,500	1.0	1.5	10	20
Moderately active ...	3,000	82	0.8	12	2,500	1.2	1.8	12	20
Active ...	3,500	96	0.8	12	2,500	1.4	2.1	14	20
Very active ...	4,250	117	0.8	12	2,500	1.7	2.6	17	20
<i>Woman</i>									
Over 60 years ...	2,000	55	0.8	12	2,500	0.8	1.2	8	20
Sedentary ...	2,100	58	0.8	12	2,500	0.8	1.3	8	20
Moderately active ...	2,500	69	0.8	12	2,500	1.0	1.5	10	20
Active ...	3,000	82	0.8	12	2,500	1.2	1.8	12	20
Pregnancy latter half ...	2,750	96	1.5	15	3,000	1.1	1.6	11	40
<i>Child</i>									
Under 1 year ...	800	28	1.0	6	1,500	0.3	0.5	3	10
1-3 years ...	1,300	46	1.0	7	1,500	0.5	0.8	5	15
4-6 years ...	1,600	56	1.0	8	1,500	0.6	1.0	6	15
7-9 years ...	1,950	68	1.0	10	1,500	0.8	1.2	8	20
10-12 years ...	2,540	86	1.2	12	1,500	1.0	1.5	10	25
<i>Boy</i>									
13-15 years ...	3,150	110	1.4	15	1,500	1.3	1.9	13	30
16-20 years ...	3,400	122	1.4	15	2,500	1.4	2.1	14	30
<i>Girl</i>									
13-15 years ...	2,750	96	1.3	15	1,500	1.1	1.6	11	30
16-20 years ...	2,500	88	1.0	15	2,500	1.0	1.5	10	30





**S U P P L E M E N T**

**Food Expenditure by  
Urban Working-Class Households  
1940 to 1949**

# THE URBAN WORKING-CLASS HOUSEHOLD DIET

## Food Expenditure and Price Trends 1940 to 1949

### Introduction

1. The First Report of the National Food Survey Committee confined itself to examining information about the quantities of foods composing the diets of urban working-class households over the period of the Survey. In order to complete the record of the Survey results, the present Supplement considers the expenditure data. The interpretation of these data is affected by a number of limitations which are explained in the following section. The limitations apply less rigorously to the record of prices paid by housewives which can be derived from the data on expenditure and quantities purchased. The price indexes that have been calculated<sup>1</sup> are required to interpret the expenditure data but they have also an interest in their own right.

2. The expenditure records are set out in a Table, appearing as Appendix B to this Supplement, showing the yearly averages for the same list of foods as that in the Tables attached as Appendix B to the First Report. As in the earlier Tables, the series given in Appendix B to this Supplement is shown for 1942 to 1949 only since the results for 1940 and 1941 are less reliable. These two years and a comparison with the position before the war are considered in the text of the Supplement.

### Food Expenditure: Limitations of the data

3. The data on expenditure share with those on consumption already published the limitations imposed by the Survey methods. There is a bias in favour of households with children and the budgets, purposely, do not cover the cost of meals prepared and eaten outside the home and of such items of personal expenditure as sweets, chocolate, ice-cream and mineral waters and alcoholic drinks. From this limitation arises the first main difference between the National Food Survey results and, for example, the National Income and Expenditure estimates. A second difference results from the wider population represented by the national estimates, which cover the whole population and not the working-class only. This second difference is of less importance than the first. With the food shortages, the levelling of real incomes during and since the war, and the comparatively large quantities of self-supplied food available to rural households, average food expenditure per head in working-class households does not appear to differ greatly from the average for the whole population. On the other hand, the items of food expenditure not included in the Survey form an important part of the budget.

4. A third difference is one peculiar to the expenditure data. It is known that during the week of the Survey the housewife tends to reduce her purchases and draw to a larger extent than usual upon her larder stocks. Her recorded purchases cannot in consequence be accepted as a precise measure of the cost of the diet during the Survey week or of the pattern of demand, even within the limited definitions of the Survey. Information on withdrawals from larder stocks is collected by the Survey so that it is possible to evaluate the extent of this disturbance of normal practice on the assumption that during the year larder stocks are replenished and that their value in any week is based on prices ruling at that time.<sup>2</sup> This correction for larder stocks is made in Table 2 which also shows the trend in expenditure and of prices over the period.

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<sup>1</sup> Methods of calculation are explained in Appendix A to this Supplement.

<sup>2</sup> See First Report, Appendix A.

## Expenditure and Prices 1940 to 1941

5. The National Food Survey did not develop into its later and fuller shape until 1942 with the result that the data for 1940, when the Survey began, and for 1941 are less complete<sup>1</sup> than subsequent material, and information on larder stock withdrawals for these years was not collected. Because of these gaps, it is not possible to provide a series of figures covering the early years of the war when the greatest changes took place in expenditure as prices rose and rationing was introduced. For prices the trend is reflected in the official Working-Class Cost of Living Index, but this Index is admittedly unsatisfactory, since it was based on budget enquiries made in 1904 and the weights appropriate to that time were no longer applicable to a diet altered by changes in habit during thirty years and then submitted suddenly to wartime restrictions. Some light can however be thrown on these changes in price and expenditure when the results of the National Food Survey collected in 1940 and 1941, and subsequently, are compared with those obtained by the Ministry of Labour's budgetary survey in 1937-1938.

6. According to the former Cost of Living Index the major change in price had been achieved by 1940 and it was at the beginning of that year that the Government introduced food subsidies and expanded its control over prices. The cost of Living Food Index showed the following changes (1st September, 1939 = 100).

1938	1939	1940	1941	1942	1943	1944	1945
102	102	119	122	116	120	122	123

The price index prepared by the London and Cambridge Economic Service, which takes account of a wider range of foods, also suggests that the major price change had occurred by 1941 but gives no indication of a recession in 1942.

1938	1939	1940	1941	1942	1943	1944	1945
100	102	116	123	125	125	125	127

If the evidence from the National Food Survey is limited to the fifteen foods<sup>2</sup> for which quantities as well as expenditure were recorded in the Ministry of Labour's enquiry, fish and such important items as fresh fruit and vegetables, whose prices rose quickly at the beginning of the war, have to be excluded. Nevertheless if the fifteen foods, which accounted for about 70 per cent of the expenditure in the 1936-1937 Survey and nearer 60 per cent in the National Food Survey, are valued at the 1937-1938 prices, in the quantities consumed in July 1940 (the date of earliest National Food Survey) the general increase in price is found to be about 15 per cent. This is probably an underestimate in view of the characteristics of the excluded foods. Analysis of the Survey data also suggests that by 1941 prices had increased by another 8 or 9 per cent to give an increase of about 25 per cent for 1941 and rather more for 1942. This trend is close to that of the London and Cambridge Economic Service Index.

7. The price trend may be compared with that for expenditure, the details of which are set out in Table 1. In 1937-1938 the recorded expenditure was 8s. 9d. The level had risen by 11 per cent to 9s. 8d. in July 1940, or a little above this level if allowance is made for larder stock withdrawals,<sup>3</sup> while the change in price was at least 15 per cent. By 1941, the increase in expenditure was less than 5 per cent over the pre-war level but by that time prices had risen by almost 25 per cent. The extent to which the pattern of expenditure had altered during this period is shown clearly in the final column in the Table. Expenditure on liquid milk, sausages, canned fish, margarine, preserves, vegetables and cereals other than bread and flour had increased by varying proportions from 27 to 81 per cent. Expenditure on the remaining foods showed decreases.

<sup>1</sup> See First Report, paragraphs 1-7.

<sup>2</sup> Liquid milk, cheese and shell eggs; beef, veal, mutton and lamb, pork and bacon; butter, margarine and cooking fat; sugar, jam, marmalade and tea; oranges, potatoes, bread and flour.

<sup>3</sup> Compare the figures collected for the years 1942 to 1949 below.

**TABLE 1**  
**Domestic Expenditure on the Main Foods by Urban Working-Class Households**  
**1940 and 1941 compared with 1937-1938**

*d. per head per week*

	1937- 1938 Ministry of Labour	1940		1941	As percentage of 1937-1938		
		July	Oct.		1940		1941
					July	Oct.	
Milk, liquid ...	9.8	10.9	11.3	12.4	111	115	127
Milk, processed ...	1.3	1.8	1.1	0.7	138	85	54
Cheese ...	2.2	2.4	2.4	1.7	109	109	77
Meat, rationed ...	14.9	16.9	18.0	12.9	113	121	87
Sausages ...	2.0	2.3	3.0	3.0	115	150	150
Bacon and ham ...	6.1	3.8	3.5	5.3	62	57	87
Fish, fresh, dried and fried ...	3.6 (b)	3.3	2.9	5.0	—	—	—
Fish, canned ...	0.9	1.9	1.7	1.3	211	189	144
Eggs, shell ...	6.0	6.7	5.7	3.6	112	95	60
Butter ...	7.8	4.1	2.1	2.8	53	27	36
Margarine ...	1.3	1.7	2.1	2.2	131	162	169
Cooking fats ...	1.7	1.1	1.1	1.2	65	65	71
Sugar ...	3.3	3.0	2.4	2.1	91	73	64
Preserves ...	1.9	2.4	1.9	2.5	126	100	132
Potatoes ...	3.5	6.1 (c)	4.4 (c)	6.2 (c)	—	—	—
Other fresh vegetables (a)	3.7	7.8	5.8	6.7	211	157	181
Fresh fruit ...	3.8	4.0	3.4	1.8	105	89	47
Bread, white and brown ...	8.5	8.4	8.2	8.6	99	96	101
Flour ...	2.7	1.5	1.3	1.6	55	48	59
Other cereals ...	5.9	7.8	8.5	10.0	132	144	169
Tea ...	5.2	3.8	3.8	4.0	73	73	77
Other beverages ...	0.7	1.1	1.0	1.0	157	143	143
Other foods ...	8.0	12.7	14.9	11.9	159	186	149
<b>Total ...</b>	<b>104.8</b> (8s. 8.8d.)	<b>115.5</b> (9s. 7.5d.)	<b>110.5</b> (9s. 2.5d.)	<b>108.5</b> (9s. 0.5d.)	<b>110</b>	<b>105</b>	<b>104</b>

(a) Tomatoes included in fresh vegetables to conform with Ministry of Labour's grouping.  
 (b) Includes chips.  
 (c) Includes chips. Separate figures for chips in 1940 and 1941 are not available.

#### Trends in Price and Expenditure 1942 to 1949

8. For the years following 1941, apart from a break during the months October to December 1947 and February and March 1948, continuous data are available from the National Food Survey. Details for each food item, as yearly averages, are given in the Appendix. Price indexes based upon these purchase and expenditure data have also been calculated taking as a base similar data for 1945.<sup>1</sup> With frequent changes dependent upon supply conditions in the character of the diet, the problem of a suitable base year presents special difficulties. These are minimised but not removed by selecting 1945, a year less favourable from the point of view of consumption levels than 1944 and more favourable than 1947. In Table 2 recorded expenditure, corrected for larder stock withdrawals, is also expressed as a percentage of 1945. Although the price index is based on recorded purchases only,<sup>2</sup> little difference in trends arises from the inclusion of the larder stock withdrawals figure in the expenditure index. It is of interest to note that although the level of stock

<sup>1</sup> See Appendix A.

<sup>2</sup> Excluding the very few items for which quantity data are not also recorded.

withdrawals rose as the diet improved after the war, in 1949 an expenditure index based on the uncorrected figure would have been only 2 points below the corrected index.

9. From 1942 to 1945 expenditure rose steadily except for a sudden jump in 1944 due mainly to higher consumption levels. By 1945 the total increase in expenditure was 15 per cent compared with a price increase of 6 per cent only, reflecting a marked recovery of the diet from the low level of 1941. After the war, the increase was accelerated and in 1949 expenditure had risen to a level 26 per cent higher than in 1945. The main reason for the rise in expenditure after the war was the price increase of 20 per cent after 1946.

**TABLE 2**  
**Urban Working-Class Households : Expenditure and Price Trends**  
**1942 to 1949**

*d. per head per week*

	1942	1943	1944	1945	1946	1947	1948	1949
Recorded purchases ...	114.2	117.3	127.1	131.6	134.8	144.4 (a)	157.0 (b)	163.9
Larder stock withdrawals	3.8	2.6	5.4	5.0	6.2	6.7	6.5 (c)	7.6 (c)
Total ...	118.0	119.9	132.5	136.6	141.0	151.1	163.5	171.5
As percentage of 1945 ...	86	88	97	100	103	111	120	126
Price index ...	94	96	99	100	102	108	117	123

(a) Nine months average, January to September.

(b) Ten months average, excluding February and March.

(c) Estimates ; simple average of monthly figure for larder stock withdrawals and free food, less estimated value of free food.

#### Levels of 1949 compared with those before the war

10. In June 1947 the earlier Cost of Living Index was replaced by an interim Index of Retail Prices based upon the Ministry of Labour's 1937-1938 survey and thus more representative of the current diet. In Table 3 the different indexes are brought together in a series from 1938 to 1949. Two periods of sharp price increases stand out: 1939 to 1941 and 1946 to 1949. By 1945 prices had risen by about one-quarter compared with the level on the eve of the war ; since the end of the war prices rose again by a further quarter, giving a total increase of 50 to 55 per cent. Expenditure increased from the 8s. 9d. recorded by the Ministry of Labour in 1937-1938 to the 11s. recorded by the National Food Survey for 1945, an increase of about one-quarter. This represented an increase of a similar order to that for prices but, as shown in detail in the First Report, the diet underwent a profound change in the meantime. Diet changes were less pronounced in the post-war period but from 1945 to 1949 expenditure increased from 11s. to about 14s., again by about the same proportion (one-quarter) as during the war, and accompanied by a similar rise in prices.

#### Prices and Expenditure 1942 to 1949 : Selected Foods

11. The recorded expenditure for most foods is given in detail in the Appendix and average prices over the period are set out year by year for the more important food groups in Table 4. Price trends may first be compared by distinguishing those foods or groups of foods for which prices increased over the period by 30 per cent or more when 1949 is compared with 1942. The items with asterisks are the subsidised foods. It should be kept in mind that, as a number of the items are groups of foods, change in average price may reflect a change in the composition of the group. For example, processed milk in 1942 included National Household Milk, but in 1949 no dried milk of this type was consumed.

**TABLE 3**  
**Food Price Trends 1938 to 1949**  
 (1945 = 100)

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949
Working-class Cost of Living Food Index ... ..	83	83	97	99	95	98	99	100	99	95(b)	—	—
Interim Index of Retail Prices—Food (June of each year. 1947 = 100) ... ..	—	—	—	—	—	—	—	—	—	100	110	111
London and Cambridge Economic Service-Food ... ..	78	80	91	97	98	98	98	100	102	108 (100)	117 (108)	124 (115)
National Food Survey (based on domestic expenditure only) ... ..	—	—	(a)	(a)	94	96	99	100	102	108 (100)	117 (108)	123 (114)

(a) See paragraph 6 in the text.  
 (b) At June, 1947.

**TABLE 4**  
**Average Price per Unit of the Main Foods 1942 to 1949**  
*(Weighted by amounts purchased within groups)*

	Unit	1942	1943	1944	1945	1946	1947 (a)	1948 (b)	1949	1949 compared with 1942
Milk, liquid	pt.	3-9	3-7	3-8	3-7	3-7	3-9	4-3	4-3	+ 10
Milk, processed	eq. pt.	3-0	3-7	3-0	3-3	5-6	7-6	3-3	5-3	+ 77
Cheese	lb.	13-3	13-3	13-4	13-3	13-3	11-6	11-0	15-2	+ 14
Meat, rationed	lb.	15-7	16-0	16-4	16-7	16-8	17-0	17-2	20-6	+ 31
Sausages	lb.	12-0	12-1	13-2	13-9	13-3	14-0	14-3	15-6	+ 30
Bacon and ham	lb.	23-0	24-6	24-2	25-0	24-8	25-2	26-4	28-3	+ 23
Fish, fresh	lb.	14-3	14-5	15-3	16-2	15-5	15-7	16-5	16-7	+ 17
Fish, canned	lb.	16-0	14-0	17-6	21-3	21-3	27-4	36-0	36-0	+ 123
Eggs, shell	No.	2-0	2-2	2-2	3-0	2-0	1-9	2-8	3-1	+ 16
Butter	lb.	19-4	20-0	19-2	19-8	19-0	17-1	16-0	17-4	- 10
Margarine	lb.	8-8	9-2	9-0	9-0	9-2	9-3	8-6	9-6	+ 9
Cooking fats	lb.	10-2	9-3	10-0	10-7	10-0	12-3	16-0	14-1	+ 38
Sugar	lb.	3-0	3-3	4-0	4-0	4-1	3-4	4-9	5-0	+ 62
Preserves...	lb.	11-1	11-4	11-3	11-5	11-7	12-8	14-4	13-9	+ 25
Potatoes (excluding chips)	lb.	1-3	1-2	1-2	1-3	1-3	1-4	1-9	1-9	+ 46
Other fresh vegetables	lb.	4-5	5-0	4-7	5-3	5-1	6-7	5-8	6-0	+ 33
Fresh fruit (including tomatoes)	lb.	9-6	10-4	9-9	9-4	10-5	11-4	12-7	11-4	+ 19
Bread, white and brown	lb.	2-3	2-5	2-5	2-5	2-8	2-8	2-9	3-1	+ 35
Flour	lb.	3-0	3-3	3-5	3-5	3-4	3-5	3-4	3-6	+ 20
Other cereals	lb.	10-6	13-5	13-6	12-9	14-5	15-6	14-9	16-4	+ 55
Tea	lb.	34-7	36-7	37-6	37-0	38-1	39-4	41-8	42-4	+ 22
Other beverages (coffee, cocoa)	lb.	26-6	26-6	29-3	28-8	28-8	28-8	41-6	41-6	+ 56

(a) Nine months' average.  
 (b) Ten months' average.

**TABLE 5**  
**Domestic Food Expenditure<sup>1</sup> and Price Trends for Different Food Groups**  
 (1945 = 100)

	1942	1943	1944	1945	1946	1947	1948	1949
<b>MILK, CHEESE AND EGGS</b>								
Expenditure ... ..	89	94	98	100	97	99	114	130
Price ... ..	97	99	100	100	100	103	116	123
<b>MEAT</b>								
Expenditure ... ..	94	94	105	100	100	102	94	103
Price ... ..	94	96	98	100	100	102	108	122
<b>FISH</b>								
Expenditure ... ..	64	63	76	100	113	109	116	97
Price ... ..	92	93	95	100	101	107	114	114
<b>FATS, SUGAR AND PRESERVES</b>								
Expenditure ... ..	88	99	105	100	104	101	124	146
Price ... ..	92	94	98	100	99	97	108	114
<b>VEGETABLES</b>								
Expenditure ... ..	86	87	94	100	102	113	118	121
Price ... ..	92	95	97	100	102	123	125	130
<b>FRUIT</b>								
Expenditure ... ..	90	85	87	100	113	171	207	186
Price ... ..	96	82	101	100	105	111	125	114
<b>CEREALS</b>								
Expenditure ... ..	87	88	93	100	101	112	121	132
Price ... ..	97	98	100	100	106	118	124	132
<b>BEVERAGES AND MISCELLANEOUS FOODS</b>								
Expenditure ... ..	90	93	95	100	114	115	132	134
Price ... ..	89	97	99	100	101	106	122	124
<b>ALL FOODS</b>								
Expenditure ... ..	87	89	97	100	103	110	120	125
Price ... ..	94	96	99	100	102	108	117	123

<sup>1</sup> Unadjusted for stock withdrawals.



<i>Increase by 30 per cent or more</i>				<i>Increase by less than 30 per cent</i>			
			%				%
Canned fish	...	...	123	*Preserves	...	...	25
Processed milk	...	...	77	*Bacon and ham	...	...	23
*Sugar	...	...	62	*Tea	...	...	22
Beverages other than tea	...	...	56	*Flour	...	...	20
Cereals other than bread and flour	...	...	55	Fresh fruit	...	...	19
*Potatoes...	...	...	46	Fresh fish	...	...	17
*Cooking fats	...	...	38	*Shell eggs	...	...	16
*Bread	...	...	35	*Cheese...	...	...	14
Fresh vegetables other than potatoes...	...	...	33	*Liquid milk	...	...	10
*Rationed meat	...	...	31	*Margarine	...	...	9
*Sausages	...	...	30	*Butter	...	...	10

12. Finally, price indexes have been calculated for eight major food groups and these with the corresponding indexes of recorded expenditure are shown in Table 5. Only items for which both expenditure and the quantity purchased could be recorded in the log books are included.

13. Groups with the greatest price stability before 1945 were milk, cheese, and eggs ; fruit ; and cereals, but no group showed an increase in price of more than 11 per cent. Subsequent to 1945, fish ; fats, sugar and preserves ; and fruit recorded the smallest increases (each at 14 per cent). For milk, cheese and eggs ; meat ; and miscellaneous items the increase was 20 to 24 per cent. For the remaining groups, vegetables and cereals, the increase was 30 and 32 per cent. Over the whole period, the expenditure index showed a greater increase than the price index for all groups with the exception of meat (for this group prices rose three times as much as expenditure) and vegetables.

## SUPPLEMENT APPENDIX A

### Calculation of the Food Price Index

1. In order to compute the price indexes used in this Supplement, expenditure data were first brought together into 88 separate food groups, and the average price for each group calculated by dividing the total expenditure on the group, as recorded in the Survey, by the total quantity of food purchased. This procedure differs from that normally adopted in calculating index numbers and raises certain difficulties, principally that of lack of homogeneity within the group. Different grades or varieties of food have often to be grouped together, for the reasons that the number of separate categories for tabulating survey results has to be limited and that the sampling errors decrease rapidly the more the individual items are brought together into groups. The foods grouped together are usually related commodities, but the procedure adopted here means that the calculated price for the group may be influenced by changes in the proportion in which the individual items are purchased as well as by actual changes in price. If all varieties of tea are grouped together, the average group price will rise if consumers buy more of the more expensive blends even if the prices for particular varieties remain unchanged. The difficulties can be minimised by the selection of as large a number of food groups as possible (for the index used in the Report, 88 represents a large number) and by the use of a suitable formula for weighting the price relatives.

2. The choice of an index formula lies, broadly, between a Laspeyres index which expresses cost in a current year of quantities purchased in a base year as a percentage of their cost in the base period ( $I = \frac{\Sigma pQ}{\Sigma PQ}$  where the lower case refers to current prices of quantities); a Paasche index, which uses quantities of the current year ( $I = \frac{\Sigma pq}{Pq}$ ); and a Fisher "Ideal" type, an index obtained by calculating the

geometric mean of the other two ( $I = \frac{\sqrt{\Sigma pQ \cdot \Sigma pq}}{PQ \cdot Pq}$ ). Only the Fisher Ideal Index obeys the test that an index for a period  $a$  on period  $A$  as base should equal the reciprocal of an index for period  $A$  on period  $a$  as base. Also, this index does, as far as possible, take into account the changing pattern of consumer expenditure. The Laspeyres index tends to overestimate price increases and the Paasche to underestimate them. The Fisher "Ideal" has accordingly been used here.

**SUPPLEMENT APPENDIX A**  
**Average prices used in Price Index : Urban Working-Class Diets 1942-1950**

	Unit	1942	1943	1944	1945	1946	1947	1948	1949	1950
Liquid milk	pt.	4.5	4.4	4.5	4.5	4.5	4.6	5.0	5.1	5.1
National scheme (cheap)	"	1.6	2.0	2.1	2.1	1.8	1.6	1.6	1.6	1.7
Condensed, unsweetened, whole	eq. pt.	5.0	4.2	4.4	4.0	5.0	5.5	3.6	7.1	6.8
Condensed, sweetened	"	6.7	7.1	7.1	9.0	8.0	8.3	4.5	4.3	4.8
Condensed, sweetened, skimmed	"	2.8	2.7	2.8	2.5	2.8	3.8	2.8	2.7	2.6
Dried, whole	"	2.8	5.8	6.1	7.3	5.7	5.7	(n.a.)	(n.a.)	6.0
Dried, skimmed	"	1.9	2.2	2.2	2.3	2.3	2.1			
Cheese	lb.	13.3	13.1	13.1	13.1	13.4	11.8	11.2	15.0	16.8
Beef and veal, grilling, roasting and boiling	"	16.0	16.5	16.7	17.9	17.3	17.6	17.9	21.6	23.8
Beef and veal, stewing	"	15.7	15.7	15.9	16.3	16.6	17.0	17.1	19.5	21.5
Canned corned beef	"	15.0	15.2	15.2	15.5	16.0	16.3	16.6	20.2	23.6
Mutton and lamb	"	16.3	19.8	19.6	18.2	19.0	19.7	16.6	20.2	22.1
Pork	"	22.9	24.5	24.3	24.8	24.6	24.5	22.4	22.7	25.4
Bacon and ham, uncooked	"	16.8	18.3	17.7	18.6	19.4	19.4	19.4	22.6	29.7
Liver	"	20.0	20.2	20.5	21.3	24.0	13.0	11.7	13.8	14.3
Kidney	"	9.6	9.3	10.1	9.8	9.4	10.9			
Other offals	"	16.5	15.6	15.3	15.7	15.8	19.4	19.4	18.9	19.6
Rabbit, poultry, game, etc.	"	26.9	21.3	27.3	23.2	24.8	26.2	27.0	30.9	44.5
Cooked meat and cooked ham	"	26.4	27.2	27.3	25.9	24.8	26.2	33.9	37.0	33.8
Meats, canned	"	13.1	12.5	13.4	12.0	14.2	17.8	14.2	15.8	17.4
Meats, prepared	"	11.8	12.2	13.2	13.9	13.6	13.9	18.9	20.0	20.9
Sausages, uncooked	"	16.2	16.2	16.9	16.8	17.1	17.3			
Meat and fish products	"	16.5	15.8	16.0	16.3	15.8	16.0	17.0	16.6	17.7
White fish, fresh, cheap	"	8.5	23.9	21.5	20.6	20.3	21.4	22.2	23.7	24.7
White fish, fresh, expensive	"	23.7	16.6	17.5	17.9	17.4	17.3	18.2	18.1	18.3
White fish, smoked, dried, salted	"	17.4	8.8	8.7	9.0	9.1	9.8	9.4	9.9	10.5
Fat, fresh and smoked	"	17.4	23.4	25.0	26.1	27.2	29.9	30.4	29.8	29.3
Fried	"	17.4	14.9	17.1	21.1	23.2	28.2	37.9	36.8	36.3
Canned	"									

	Unit	1942	1943	1944	1945	1946	1947	1948	1949	1950
Eggs, shell	each	2.1	2.0	2.0	2.0	2.0	1.9	2.9	3.1	d. 3.4
Eggs, dried	lb.	27.5	22.7	19.9	20.0	22.1	34.6	68.6	102.9	98.2
Butter	"	19.2	20.5	19.9	20.0	19.0	17.0	15.7	17.3	21.1
Margarine	"	8.8	9.0	9.0	9.0	9.1	9.1	8.8	9.6	10.0
Lard and cooking fat	"	9.1	9.2	9.2	9.3	9.4	11.2	15.4	14.4	14.0
Suet and dripping	"	11.2	11.9	12.5	14.4	14.7	14.9			
Tomatoes, fresh	"	16.5	16.4	15.8	15.4	16.2	16.0	19.5	15.4	15.2
Tomatoes, canned	"	8.2	(n.a.)	16.0	(n.a.)	12.0	9.1			
Citrus fruit	"	7.8	7.4	8.3	7.5	7.5	8.5	8.5	8.5	9.2
Apples	"	(a)		8.0	8.2	8.3	8.0	10.6	9.9	9.8
Fresh rhubarb	"	(b)		6.9	7.5	6.6	8.6			
Other fresh fruit	"	7.5	8.4	9.7	9.6	11.7	12.2			
Bottled fruit and canned fruit	"	10.9	8.7	24.9	16.0	16.0	32.0	15.7	14.7	15.8
Canned fruit	"	9.3	9.5	8.6	(n.a.)	11.2	14.1	11.7	11.7	11.5
Dried vine fruit	"	8.8	9.1	9.0	9.4	9.0	10.2	15.4	17.6	17.1
Dried prunes, apricots, etc.	"		8.7	9.2	8.8	9.9	13.4			
Dried apples, pears, figs, dates, etc.	"			9.8						
Chips	"	8.5	8.5	8.3	9.1	9.0	10.1	10.1	10.1	10.4
Potatoes, old	"	1.1	1.0	1.1	1.1	1.1	1.3	1.9	1.9	2.0
Potatoes, new	"	1.4	1.8	1.7	1.8	2.1	2.2	3.5	3.5	3.6
Carrots	"	2.2	2.1	2.2	2.4	2.4	3.0	2.9	3.5	3.6
Turnips and swedes	"	5.0	2.9	2.0	2.2	2.4	2.7	3.7	3.5	3.6
Other root vegetables	"			4.2	4.2	4.5	5.3			
Cabbage	"			3.7	3.7	3.8	6.7	4.3	4.5	6.0
Brussels sprouts	"		5.6	6.2	5.9	6.6	10.2	6.9	7.5	7.9
Cauliflower	"	4.3		5.9	5.9	6.1	11.4	6.4	7.5	8.2
Other fresh green vegetables	"			16.0	20.2	19.2	19.5	5.3	5.3	7.6
Lettuce and endive	"		13.9	17.2	17.0	17.1	19.2	16.5	18.2	15.9
Fresh peas and beans	"	5.1	15.8	7.6	7.4	7.2	7.8	7.2	8.5	5.4
Canned peas and beans	"	7.5	7.4	7.2	7.2	7.5	8.3	10.1	10.9	11.0
Dried pulses	"	7.4	9.3	8.9	9.6	9.8	10.2	11.4	11.7	12.2
Other canned vegetables	"	(n.a.)	7.4	7.2	8.6	8.8	9.9	11.7	11.8	11.1
Spanish onions, shallots	"	(n.a.)	6.6	4.8	5.1	4.5	4.2	5.1	4.5	6.1
Miscellaneous vegetables	"	(n.a.)		7.9	8.0	8.5	11.2	14.7	14.1	12.2

(a) Included in other fresh fruit.  
 (b) Included in bottled and canned fruit.  
 (n.a.) Not available.

Average prices used in Price Index: Urban Working-Class Diets 1942-1950—continued

	Unit	1942	1943	1944	1945	1946	1947	1948	1949	1950
National and brown flour	lb.	2.9	2.4	2.5	2.6	2.6	2.6	3.5	3.7	d.
National and brown flour, self-raising	"	2.2	3.6	3.6	3.7	3.7	3.7	2.6	2.7	4.1
National bread	"	2.2	2.4	2.3	2.2	2.6	2.6	2.6	7.4	3.3
Rolls, etc.	"	2.2	2.4	5.6	5.4	5.8	6.4	7.2	7.4	8.2
Muffins and crumpets, etc.	"	4.6	4.0	3.5	6.7	8.0	8.8	4.2	4.3	5.0
Other brown bread	"	13.0	13.6	14.2	14.2	15.0	18.1	19.7	20.5	21.1
Biscuits, including crisp bread	"	16.6	14.0	12.4	12.6	13.0	14.7	15.7	17.4	11.4
Buns and scones	"	4.6	5.5	16.0	16.5	17.0	20.8	23.7	25.0	25.8
Cakes	"	4.6	4.3	8.3	6.7	7.5	10.2	8.2	8.2	8.6
Oatmeal and oat products	"	11.5	11.6	4.3	4.3	4.5	5.3	14.4	14.6	15.6
Oat products	"	6.6	6.7	11.6	11.5	11.7	13.0	11.5	11.7	12.1
Breakfast cereals (not oats)	"	12.3	12.5	6.9	7.0	(n.a.)	(n.a.)	11.5	11.7	12.1
Whole rice, sago, and tapioca	"	8.2	9.5	8.8	8.6	9.4	10.6	11.5	11.7	12.1
Cornflour, custard powder, etc.	"	25.0	25.0	25.5	27.2	27.8	28.8	36.6	36.8	36.4
Other farinaceous foods	"	32.8	36.8	37.4	37.4	37.8	39.2	41.8	42.4	42.5
Cocoa and patent drinks	"	32.0	30.0	30.2	30.6	33.8	34.9	54.1	56.0	59.4
Tea	"	3.0	3.3	4.0	4.0	4.0	3.4	5.0	5.1	5.1
Coffee powder or beans	"	11.2	8.2	8.8	9.0	8.6	10.1	9.8	9.8	9.7
Sugar	"	9.0	9.4	9.4	9.4	9.3	10.9	15.8	16.5	16.3
Rationed preserves	"									
Other sweet spreads	"									
Tinned soup	"									

(n.a.) Not available.

**SUPPLEMENT APPENDIX B**  
**The National Food Survey**  
**Food Expenditure by Urban Working-Class Households 1942-1950**

	1942	1943	1944	1945	1946	1947 (l)	1948 (m)	1949	1950
Liquid milk ... ..	13.2	14.2	14.8	15.3	14.6	14.7	16.6	17.7	19.4
Condensed and dried milk ... ..	0.9	1.1	1.2	1.0	1.4	1.9	1.3	1.6	1.9
All milk ... ..	14.1	15.3	16.0	16.3	16.0	16.6	17.9	19.3	21.3
<b>Cheese (a)</b> ... ..	2.9	2.5	2.1	2.0	2.0	1.6	1.3	2.0	2.4
Rationed meat (excluding corned beef) ... ..	13.4	14.0	14.4	14.3	14.3	13.6	12.5	14.7	19.6
Corned beef ... ..	—	—	—	0.8	1.6	2.5	1.3	0.7	0.7
Canned meats (b) ... ..	2.1	2.0	2.7	2.5	2.0	2.8	1.2	1.6	2.4
Sausages ... ..	3.0	2.8	3.3	3.3	3.5	3.6	4.2	4.1	4.3
Miscellaneous meats (c) ... ..	3.2	2.6	3.7	2.5	2.3	2.3	3.1	3.6	4.4
Bacon ... ..	5.6	6.0	6.8	5.3	4.8	3.3	3.3	4.6	8.1
All meats (d) ... ..	27.3	27.4	30.9	28.7	28.5	28.1	25.6	29.3	39.5
Fish (other than canned) ... ..	5.8	5.7	6.6	8.9	10.1	9.8	10.7	8.9	7.3
Canned fish ... ..	0.6	0.7	1.1	1.2	1.2	1.2	0.9	0.9	0.8
All fish (e) ... ..	6.4	6.4	7.7	10.1	11.3	11.0	11.6	9.8	8.1
Eggs, shell ... ..	1.8	1.3	1.3	1.9	2.2	2.5	4.5	7.1	9.8
Eggs, dried ... ..	0.8	1.7	2.2	1.9	1.2	1.3	1.3	0.4	0.2
All eggs ... ..	2.6	3.0	3.5	3.8	3.4	3.8	5.8	7.5	10.0
Butter ... ..	2.3	2.5	2.4	2.6	3.2	3.0	3.0	3.7	5.6
Margarine ... ..	2.2	2.3	2.3	2.2	1.9	1.8	2.0	2.4	2.4
Cooking fats, rationed ... ..	1.0	1.1	1.1	0.9	0.7	0.7	1.1	1.5	1.4
Other fats, including suet and dripping ... ..	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.7	0.8
All fats ... ..	5.8	6.2	6.2	6.0	6.1	5.8	6.4	8.3	10.2
Tomatoes ... ..	2.4	2.4	1.9	2.0	2.6	4.5	6.0	5.2	4.2
Other fresh fruit ... ..	3.2	3.2	3.9	4.9	5.2	7.4	8.0	7.0	6.8
Canned and bottled fruit (f) ... ..	0.6	0.3	0.1	—	0.2	0.6	1.1	1.1	1.2
Dried fruit and nuts ... ..	0.7	0.7	0.9	0.9	0.8	0.9	0.8	1.0	0.9
All fruit (g) ... ..	6.9	6.6	6.8	7.8	8.8	13.4	15.9	14.3	13.1

Food Expenditure by Urban Working-Class Households 1942-1950—cont. *d. per head per week*

	1942	1943	1944	1945	1946	1947 (l)	1948 (m)	1949	1950
Potatoes ...	4.9	4.7	4.8	4.9	5.3	5.4	6.5	7.2	7.2
Chips and crisps ...	1.2	1.4	1.2	1.6	1.8	2.2	2.8	2.2	1.6
Fresh green vegetables ...	3.2	3.9	4.6	4.6	4.6	4.6	4.2	4.1	4.0
Fresh peas and beans ...	1.2	1.3	1.3	1.3	0.9	1.3	1.4	1.1	0.8
Carrots ...	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5
Other root vegetables and miscellaneous fresh vegetables ...	2.8	2.0	2.5	2.5	2.3	2.8	2.7	2.5	2.4
Canned and dried vegetables ...	1.1	1.3	1.3	1.8	1.9	2.5	2.1	3.0	3.6
All vegetables (h) ...	14.9	15.1	16.2	17.2	17.3	19.3	20.2	20.7	20.1
Bread (i) ...	8.5	9.1	9.3	9.7	10.3	11.0	11.7	11.6	12.6
Flour ...	1.2	1.4	1.6	1.4	1.3	1.2	1.4	1.6	1.7
Biscuits (j) ...	2.0	1.4	1.6	2.4	2.3	2.3	3.0	3.6	4.5
Cakes, buns and scones ...	6.6	6.9	7.3	8.2	7.7	9.2	9.1	10.6	10.5
Oatmeal and oat products ...	0.4	0.3	0.5	0.4	0.4	0.4	0.7	0.6	0.6
Breakfast cereals ...	0.5	0.5	0.6	0.6	0.7	0.8	1.2	1.3	1.2
Other cereal foods (k) ...	1.2	1.2	1.2	1.0	1.3	1.4	1.7	1.8	1.8
All cereals ...	20.4	20.8	22.1	23.7	24.0	26.3	28.8	31.1	32.9
Cocoa ...	0.8	0.8	0.9	0.7	0.7	0.7	0.9	0.8	0.7
Tea ...	3.8	3.9	4.0	4.4	5.0	4.8	4.7	4.9	5.3
Coffee ...	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.5	0.5
All beverages ...	4.8	4.9	5.1	5.3	5.9	5.7	6.0	6.2	6.5
Sugar ...	1.6	1.8	2.3	2.3	2.5	2.2	3.3	3.4	3.1
Preserves (including syrup and treacle) ...	2.5	3.2	3.4	3.1	3.3	3.6	4.5	4.8	4.5
Other foods ...	4.0	4.1	4.8	5.3	5.7	7.0	9.7	13.4	6.4
Totals <sup>1</sup> ...	114.2	117.3	127.1	131.6	134.8	144.4	157.0	163.9	178.1

(a) Includes non-rationed cheese.  
 (b) Includes prepared meats.  
 (c) Offals, rabbits, poultry, game and cooked meats.  
 (d) Excludes meat products and bones.  
 (e) Excludes fish products.  
 (f) Includes fruit juices.  
 (g) Includes fruit and nut products.

(h) Excludes vegetable products.  
 (i) Includes rolls, breadcrumbs, currant and malt bread, muffins and crumpets.  
 (j) Includes rusks and crispbread.  
 (k) Includes rice, sago, tapioca, cornflour and custard powder.  
 (l) Nine months' average.  
 (m) Ten months' average.

<sup>1</sup>These do not include the value of larder stock withdrawals, nor of "free" food, except the total for 1942 which includes "free" food to the value of 3d.

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