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Contributors

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What do they eat in the United States, Canada and Britain today?

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PREFACE

The Combined Food Board, of which the United States, Canada and the United Kingdom are members, was set up "in order to co-ordinate further the prosecution of the war effort by obtaining a planned and expeditious utilisation of the food resources of the United Nations." It needs for the fulfilment of its duties complete and comparable information on the rates of food consumption in the counties with which it is concerned. With a view to obtaining better information on this subject the Board set up in the summer of 1943 a Committee of experts and officials from the United States, Canada and the United Kingdom to make a comparison of civilian food consumption levels in those three countries. The Committee have held meetings in Washington, London and Ottawa and have had access to all the confidential Government food statistics of the three countries. findings are briefly summarized here and their report to the Combined Food Board has also been published.* report provides the most complete and reliable comparison of food consumption levels in the three countries which has yet been produced and illustrates the ever-growing exchange of information and understanding which is developing among the three countries. It also provides a standard method for estimating and comparing the food supplies of different countries which should be of considerable value in connection with post-war problems.

^{*} Food Consumption Levels in the United States, Canada and the United Kingdom. Price 2s., by post 2s. 2d.



What do they eat in the United States, Canada and Britain today?

(Summary of the Report to the Combined Food Board of the Special Joint Committee (1943) on Food Consumption Levels in the United States, Canada and the United Kingdom)

The supplies of food reaching the average civilian in Britain today are smaller than those reaching the average civilian in the United States or Canada but they are enough to maintain health and working efficiency. Average food supplies in Canada are very close to those in the United States and in both countries the average supplies of most foods are at or above the 1935–39 level. Marked increases in military and export requirements have in general been matched by

increases in farm production.

United Kingdom supplies of most foods have fallen sharply below the 1935–39 level as a result of reduced imports. The United Kingdom is about 10 per cent. below the other two countries in total food supplies, measured in calories per head, and considerably farther below in most of the foods which consumers prefer—notably meats, poultry, eggs, butter, sugar and fruits. There have been offsetting increases in the consumption of grain products, vegetables, potatoes, and milk and milk products (excluding butter). On balance, however, the United Kingdom diet is less attractive, less varied, and less convenient from a culinary standpoint than those of the other two countries.

The United States and Canadian diets have also suffered some restriction in variety, and consumers remote from producing areas have encountered shortages due to distribution difficulties. In general, however, United States and Canadian consumers have had to make much smaller adjustments in consumption habits than have United

Kingdom consumers.

Wartime Changes in Each Country

Such in broad outline is the food position in the three countries today. To see how this position developed it is necessary to look at the changes which have taken place in each country during the period covered by the enquiry—the five years up to 1939, and each sub-

sequent year to date.

In the United States, food consumption increased substantially in 1940 and 1941, particularly for meat, milk, poultry, eggs, fats, sugar and citrus fruits. These were pre-war years in the United States with rapidly expanding industrial activity and agricultural production. Following the entry of the United States into the war, imports were limited and rationing was introduced. Although food production continued to increase, the heavy demands of the armed forces, and the need to ship food to allied countries reduced the

supplies available for civilian consumption. The 1943 consumption level represents a marked decline from the high point, especially in the case of sugar, fats, and non-citrus fruits which have now been

reduced below the pre-1939 level.

In Canada there has been a steady improvement in food supplies up to 1943 but the effects of rationing are shown in the reduction in 1942 in the consumption of sugar and in 1943 in butter consumption. The agricultural output of Canada has changed considerably during the wartime period, production of some foods, particularly pork and pork products and cheese, having been substantially increased. To a large extent, however, these changes have been designed to provide

greater supplies of food for the allies.

The effects of wartime conditions and shortages were already evident in the United Kingdom (i.e. England, Scotland, Wales and Northern Ireland) in 1940. Rationing was introduced during this year and, because of the loss of European sources of supply and the shortage of shipping, the supplies of such foods as meat, butter, sugar and cheese were heavily reduced. In the first half of 1941, United Kingdom food supplies fell to their lowest point during the wartime period and caused anxiety as to their effect on health and capacity for work. This position improved when, in the second half of 1941, Lend-Lease supplies began to reach consumers and the supply levels since then have been remarkably stable.

The large increase in food production which has been achieved by the British farmers has involved a profound modification of the pattern of United Kingdom agriculture. The ploughing up of grassland has increased crop production, but at the expense of livestock farming, particularly the production of beef, pigs and poultry, which have also suffered severely from the heavy reduction in imports of feedstuffs. This has affected the United Kingdom diet but has greatly reduced

the demands on shipping for food imports.

In the United Kingdom, and to a lesser extent in the United States and Canada, rationing and the improved purchasing power of the lower income groups have resulted in a distribution of food more closely in accordance with individual needs than before the war. Shortages of certain foodstuffs which have occurred from time to time in the United States and Canada, have frequently been of a regional nature and due to increased demand or transportation difficulties rather than to a reduction in total supplies.

Comparative Supplies of Different Foods

This is the background against which comparisons of the supplies of different foods in the three countries should be considered. The estimated supplies moving into consumption per head of the civilian population in each country are set out in Table I. The comparisons are also illustrated in Chart 1 and the size of the changes which wartime conditions have necessitated are illustrated in Chart 2. Finally the movements in average supplies year by year are shown in graph

form in Chart 3. The story told by the table and charts is briefly summarised below. The food groups given first are those of which the United States and Canada have more than the United Kingdom.

MILK AND MILK PRODUCTS (EXCLUDING BUTTER):

The 1943 supply of milk and milk products, in terms of milk solids, averaged about 65 pounds per capita for the United States, 65 for Canada, and 49 for the United Kingdom. The United Kingdom consumption was well below the other countries before the war but as a result of the feedstuffs priority given to dairy cows and the importation of cheese and dried milk, the United Kingdom supply of milk and milk products (excluding butter) is now nearly 30 per cent. above pre-war but still only about three-fourths of that of the United States or Canada.

MEAT (CARCASE AND CANNED MEAT AND BACON):

In terms of carcase weight, per capita supplies in 1943 averaged 141 pounds in the United States and 134 pounds in Canada. In the United Kingdom they averaged 107 pounds or 24 and 20 per cent. respectively below the levels in the other two countries. The United States 1943 level represented a marked reduction from 1942 but was still somewhat above the level of 1935–39. Canadian consumption has increased slowly and is now approaching the United States level. In the United Kingdom supplies have fallen by about 20 per cent., mainly because of the reduced United Kingdom meat production resulting from the transition which has been effected from livestock to wheat and potato growing in order to obtain the largest possible output from the country's agricultural resources.

POULTRY AND FISH: EGGS:

In 1943, United Kingdom per capita supplies of poultry and fish (as edible weight) were about two-thirds of the United States and Canadian levels, and of eggs (including dried eggs as fresh equivalent) rather more than half. The consumption of poultry and eggs has shown a steady expansion in the United States and Canada since 1935–39. In the United Kingdom the production of poultry and eggs has been severely cut to economize feedstuffs and more than half the present supply of eggs is in dried form received mainly under Lend-Lease. Fish supplies, formerly important in the United Kingdom diet, are also much more scarce, largely owing to the diversion of fishing vessels to war purposes.

BUTTER AND OTHER FATS:

In 1935–39 the average per capita supplies were about the same in all three countries. Consumption tended to increase up to 1941 in the United States and 1942 in Canada but has since

been reduced by rationing to about the 1935–39 level in both countries. *Per capita* supplies in the United Kingdom have fallen to about 15 per cent. below the pre-war level, a 70 per cent. decrease in butter supplies having been partially made good by margarine.

SUGAR AND SYRUPS:

The average per capita supply in the United Kingdom was equivalent to about 65 pounds of sugar in 1943, about 20 per cent. less than the average for Canada and the United States. Supplies have been reduced in the United Kingdom by about 30 per cent. and in the two North American countries by about 20 per cent. as compared with 1935–39.

FRUITS, FRUIT PRODUCTS, AND TOMATOES:

The 1943 average per capita supply of tomatoes and citrus fruit (fresh weight equivalent) was 103 pounds in the United States, 62 pounds in Canada, and 23 pounds in the United Kingdom. For other fruits it was 104 pounds in the United States, 72 in Canada, and 52 in the United Kingdom. Compared with 1935–39 this represented reductions for the United Kingdom of 50 per cent. for tomatoes and citrus fruit and of about 45 per cent. for other fruits. The United States civilian supply of citrus fruit and tomatoes is 17 per cent. above pre-war but of other fruit more than 30 per cent. below pre-war. The Canadian situation with respect to citrus fruit and tomatoes has improved by 20 per cent., while the supply of other fruits is down almost 10 per cent.

PULSES AND NUTS:

The average per capita supply of pulses (dried beans, peas and lentils) and nuts in 1948 was about 19 pounds in the United States, 12 pounds in Canada and 6 pounds in the United Kingdom. This represented an increased consumption of nearly 20 per cent. compared with 1935–39 in the United States, a small decline in Canada and a fall of about 40 per cent. in the United Kingdom, where practically all edible nuts have disappeared and the types of pulse with which the British consumer is familiar are in short supply.

The foregoing groups contributed appreciably less to the calorie value of the United Kingdom 1943 diet than they did before the war or than they do in the other two countries. The food consumption of a country, however, cannot depart far from its needs in terms of calories without serious consequences. If one food is unobtainable another must be substituted. The foods by which the United Kingdom has made good its shortages in the above-mentioned food groups are:—

GRAIN PRODUCTS (FLOUR, RICE, OATMEAL, ETC.):

The per capita supply of grain products in 1943 was 201 pounds in the United States, 215 pounds in Canada and 247 pounds in the United Kingdom. This represented practically no change from the pre-war position in the United States, an increase of 4 per cent. in Canada and one of 17 per cent. in the United Kingdom, where there has been a considerably greater consumption of bread and other grain products in replacement of other foods. In spite of the higher consumption, import requirements of wheat have been reduced by raising the extraction rate for flour from 70 per cent. to 85 per cent. and by a large increase in the acreage under wheat in the United Kingdom.

POTATOES:

There was an increase of 45 per cent, in the consumption of potatoes in the United Kingdom in 1943 compared with 1935–39. This has been effected by price subsidies and publicity designed to stimulate the production and use of potatoes, thus making full use of the country's land resources and reducing the need to import other foods. Consumption has also increased moderately in the United States and Canada. Supplies moving into civilian consumption in 1943 averaged 155 pounds per capita in the United States, 205 pounds in Canada, and 255 pounds in the United Kingdom.

VEGETABLES:

United Kingdom consumption of leafy, green and yellow vegetables and also of other vegetables has increased by about one-third since the pre-war period. Smaller increases have occurred in United States consumption but there has been a slight decline in Canada, where supplies of vegetables are much smaller than in the other two countries. The long winter season in Canada makes difficult the production and storage of many types of vegetables. Victory gardens have contributed greatly to the supply in the United Kingdom and to a lesser extent to that in the United States and Canada as well.

The Nutrient Picture

A comparison of the total diets cannot, however, be obtained by simply adding up the weights of the different foods in the three countries. One pound of cabbage, for instance, has not the same food value as one pound of meat. It is therefore necessary also to consider the nutritional values of the food supplies moving into civilian consumption in the three countries. The estimated supplies of nutrients available for consumption in each country are set out in Table 2 and briefly discussed below. The movements in average nutrient supplies year by year are shown in graph form in Chart 4.

Available supplies per head of fat, carbohydrates, and protein are somewhat greater in the United States and Canada than in the United Kingdom. During the four war years, the United Kingdom diet has declined rather sharply in fat content; in 1943 the fat content of the United States and Canadian diets was above that in 1935–39.

In all three countries there has been a slight decline in the supply of carbohydrates and an increase in the total supply of protein. The total protein increase in the United Kingdom, however, has been accompanied by a marked decline in the proportion of animal protein to vegetable protein. In the United States the proportion has remained about the same and in Canada the proportion of animal protein has increased noticeably. The actual level of animal protein consumption today is appreciably higher in the United States and Canada than in the United Kingdom.

When protein, fat, and carbohydrates are combined in terms of calories, a slight decline is shown in the United Kingdom and a slight increase in Canada and the United States. The average 1943 supplies in Canada and the United States are about equal and the United

Kingdom supply is roughly 10 per cent. lower.

It is difficult to assess the average calorie requirement of a population, because individual requirements vary according to age, sex, and activity, among other things. But since the degree of war mobilization of manpower and womanpower is higher in the United Kingdom, it is certainly safe to assume that the average calorie requirement there is at least as great as that in the other two countries. In the United Kingdom, however, food control is more complete and the public perhaps realize more acutely the need for food economy. It is therefore probable that in the United Kingdom there is less waste and food gets distributed more closely in accordance with individual needs.

As for minerals and vitamins, all three countries' positions are at least as good as in 1939. Increases in these supplies have been, in most cases, proportionately greatest in the United Kingdom—largely because of the high extraction flour now eaten there and of increased consumption of vegetables. In actual supplies, however, and not in terms of proportionate increases, levels in the United Kingdom are the lowest. With the exception of vitamin C, of which there is not enough in Canada, average supplies of minerals and vitamins necessary in the diet are adequate in all three countries, although in some cases a wider margin would be desirable to provide for storage and cooking

losses and unequal distribution.

It is finally necessary to consider the general acceptability of a diet to the consumer as well as its nutritional value. Unless a diet reaches an acceptable standard of palatability, the quantity of food eaten will be inadequate. This appears to have been the case in the United Kingdom in the first half of 1941 when, although supplies of bread and potatoes were unrestricted, the food intake fell to its lowest wartime level and there were indications of impaired health and working efficiency. The 1943 position shows an improvement on that

period but is still marginal and any further appreciable changes of an unfavourable character in the United Kingdom diet would give rise to apprehension as to their effects.

The Reliability of the Estimates

In preparing the estimates given above great care was taken to ensure that the figures were comparable, and that food supplies from all sources were included and deductions made for all exports, supplies to the armed forces, and other similar items. Thus the figures used are more reliable and comparable than those used in any previous

comparisons which may have been made.

They were arrived at by dividing the total food supplies moving into civilian consumption in each country by the number of civilian consumers including any members of the armed services fed from civilian sources. Thus all the estimates given here represent national averages. They reflect with reasonable accuracy both the changes from year to year in food consumption in each country and the comparisons of the food consumption levels in the three countries. It should, however, be noted that they do not represent the quantities of food actually eaten.

The quantities were measured at the point of retail distribution, except in the case of meat which was measured at the point of wholesale distribution. Thus the figures take no account of the waste—some avoidable and some unavoidable—which takes place in homes and restaurants during preparation and cooking and at the table. To this

extent they overstate consumption.

Further, all the figures are averages. They thus ignore differences in the food consumption levels and habits of different geographic, occupational, social and other groups. Since reliable and comparable information about the quantities of food actually eaten by individuals or groups of individuals in the different countries is not obtainable, the method adopted here of comparing the average per capita supplies moving into civilian consumption represents the best practicable way of comparing food consumption levels in different countries. In framing the conclusions which follow, due account has been taken of the limitations arising from the use of average supply figures.

General Conclusions

The pre-war diets of the three countries were very similar in both their commodity composition and their total nutrient content. Exceptions were that the United Kingdom was considerably below the United States in consumption of milk and milk products (excluding butter), poultry, eggs, and fruits and Canada was much below the United States in consumption of fruits and vegetables. This was offset, however, by a considerably higher consumption of potatoes and a slightly higher consumption of grain products in Canada and the United Kingdom.

By comparison with the pre-war period the amount of food passing into civilian consumption in 1943, measured in calories per head, had increased slightly in Canada and the United States and had decreased by 5 per cent. in the United Kingdom. The United Kingdom suffered sharp declines in most of the foods ordinarily preferred by consumers, notably meats, poultry, fish, butter, sugar and fruits. These losses have been largely replaced by marked increases in the consumption of grain products, potatoes, vegetables and milk and milk products (excluding butter).

In the United States and Canada changes in the supplies of particular food products were much smaller. For many foods the 1943 level of supplies was lower than at the time of highest consumption in 1941 and 1942 but in general the changes in comparison with 1935–39 have been in an upward direction. By making appropriate changes in diet, as the United Kingdom has done, the United States and Canada could, if necessary, effect further economies in the agricultural resources required to provide their civilian populations with an adequate diet.

In 1943 the United States and Canadian diets were if anything more similar than before the war. Canadian consumption was, however, slightly lower than United States consumption for most of the preferred food groups and much lower for fruits and vegetables, this being counterbalanced by higher consumption of grain products and potatoes. The United Kingdom is about 10 per cent. below the other two countries in total food supplies, measured in calories per head, and considerably further below in most of the preferred food groups. United Kingdom supplies of milk and milk products (excluding butter), meats, and sugar are about three-fourths of United States supplies; poultry and fish about two-thirds; eggs and fruits other than citrus about one-half; and citrus fruits and tomatoes about onefourth. Consumption of grain products, vegetables, and potatoes is much higher than in the United States. In consequence, the United Kingdom diet is less acceptable to consumers than are those of the other two countries and suffers from lack of variety and culinary convenience.

In all three countries enough food passes into civilian consumption to provide for everyone a diet which experts on nutrition would regard as reasonably adequate, provided that there is no serious waste or maldistribution. While average supplies per head of calories and certain nutrients in the United States and Canada are higher than in the United Kingdom, it is probable that in the United Kingdom supplies are distributed more closely in accordance with individual requirements and household waste is lower. This means on the one hand that the figures for the United Kingdom may not represent a nutritional position as much less favourable as the higher figures for United States and Canada suggest. On the other hand, it means that the amount of food needed to provide a reasonably adequate diet for the civilian population could be reduced in Canada and the United States if waste of food and those inequalities of distribution which still remain could be reduced.

ESTIMATED SUPPLIES MOVING INTO CIVILIAN CONSUMPTION TABLE 1

(Ib. per head per year)

	Sur	Supplies Pre-war	var	St	Supplies 1943	60	Percent	Percentage change 1943 compared with Pre-war	1943 e-war	Supplies in U.K. 1943 as % of	in U.K.	Canada 1943 as
												Jo %
	U.S.A.	Canada	U.K.	U.S.A.	Canada	U.K.	U.S.A.	Canada	U.K.	U.S.A.	Canada	U.S.A.
Milk and milk products, exclud-												
(fat and non-fat)	55.0	54.6	38.3	64.4	64.3	49.5	+17	+18	+28	-76	77	100
canned (as carcase weight)	134.9	120.1	136.4	141.3	134-4	107.3	+ 5	+12	-21	92	08	95
Poultry, game and fish (edible weight)	26.1	25.8	30-6	27.6	26.2	18.8		+	-39	89	72	95
Eggs (fresh equivalent)	35.6	30.5	24.4	41.2	37.8	22.9	+16	+24	9 -	26	61	92
nt)	45.1	41.2	45.6	44.5	43.6	38.4		9 +	91-	98	88	86
s (sugar co	105.3	97.0	94.5	84.0	79.1	65.0	-20	-18	-31	77	82	94
Potatoes	142.7	191.7	177.0	155-1	205-1	255.8	6 +	+ 1	+45	165	125	132
Pulses and nuts (weight without shell)	15.8	12.6	9.5	19.3	11.7	9.9	+ 22	- 7	-41	53	48	19
Tomatoes and citrus fruits (fresh fruit equivalent)	88.3	51.1	46.8	103.0	61.5	23.2	+17	+20	-20	23	38	09
npo	151-3	9.62	93-5	104.1	72.4	52.0	-31	6 -	-44	20	72	70
Leafy, green and yellow vege-	1 0	49.0	000	1.60	49.9	139.7		6	+34	149	307	46
tables '	69.3	34.0	48.6	65.4	32.8	64.4	++		+33	86	196	50
Grain products	200.7	206.9	211.0	201.2	215.4	247.4	1	+ 4	-	123	115	107
Beverages (tea, coffee, cocoa)	16.0	10.8	13.5	14.3	10.5	12.3	-11		6 -	86	117	73

NOTES: (1) The figures in the above table and in all other tables in this report are national averages and should not be taken to represent the actual supply received by each individual consumer.

(2) Including Victory Garden Production.

ESTIMATED SUPPLIES OF NUTRIENTS AVAILABLE FOR CIVILIAN CONSUMPTION

(per head per day)

	Su	Supplies Pre-war	war	01	Supplies 1943	13	Percent	Percentage change 1943 compared with Pre-war	e 1943 e-war	Supplies in U.K 1943 as % of	in U.K.	Canada 1943 as % of
	U.S.A.	Canada	U.K.	U.S.A.	Canada	U.K.	U.S.A.	Canada	U.K.	U.S.A.	Canada	U.S.A.
Calories Protein—Animal (gm.) Vegetable (gm.)	3,228 (3,080) 51 38	3,124 (3,020) 49 39	2,984	3,283 (3,130) 56 39	3,223 (3,120) 57 40	2,827	+ ++	+ + + 3	- 5 + 23	86 (90) 72 121	88 (91) 71 116	98 (100) 102 104
Total (gm.)	68	88	81	96	16	87	+ 1	+10	+ 7	92	90	103
Fat (gm.) or Carbohydrate (gm.)	132 420 (380)	122 417 (390)	130	138 413 (375)	133 409 (385)	113	+	+	-13 - 2	82 89 (98)	85 89 (95)	97 99 (103)
Calcium (mgm.) Vitamin A (I.U.)	868 14 6,486	830 15 6,133	694 13 3,868 (4,700)	996 16 6,979	956 16 6,783	1,054 16 3,882 (5,000)	++15+8+8	++15	+27	106 103 56 (72)	110 99 57 (74)	96 104 97
AscorbicAcid (Vitamin C) (mgm.) Thiamin (Aneurin or Vitamin B.) (mgm.)	99	1.9	1112	106	61	127	+ 7 + 37	+ + 6	+13	120	208	83 83
Acid) (mgm	2.0	1.8	(1:4) 1:6 18	2.3	2·1 19	(2·1) 19 19	+18	++13	++30	888	(105) 98 100	90

NOTES: (1) The figures in the above table and in all other tables in this report are national averages and should not be taken to represent the actual supply received by each individual consumer. No allowance has been made in the above figures for the substantial losses of some nutrients which may occur in storage, preparation and cooking.

(2) The figures in brackets following those for calories and carbohydrates (U.S.A. and Canada) and for vitamin A and thiamin (U.K.) indicate the approximate values if calculated with the same nutrient factors as for the other countries. For these nutrients the methods of estimation in the three countries are not entirely comparable. For other nutrients this difficulty does not arise and the figures may be regarded as comparable.

CHART 1.

COMMODITY SUPPLIES MOVING INTO CIVILIAN CONSUMPTION IN 1943

Consumption per head in Canada and United Kingdom shown as percentages of United States.

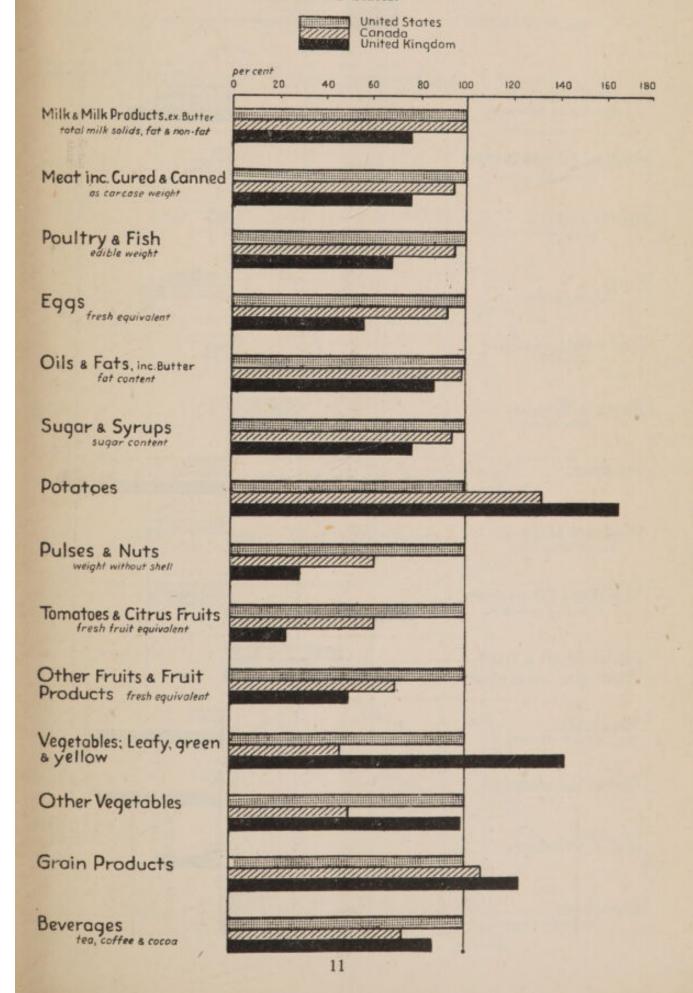
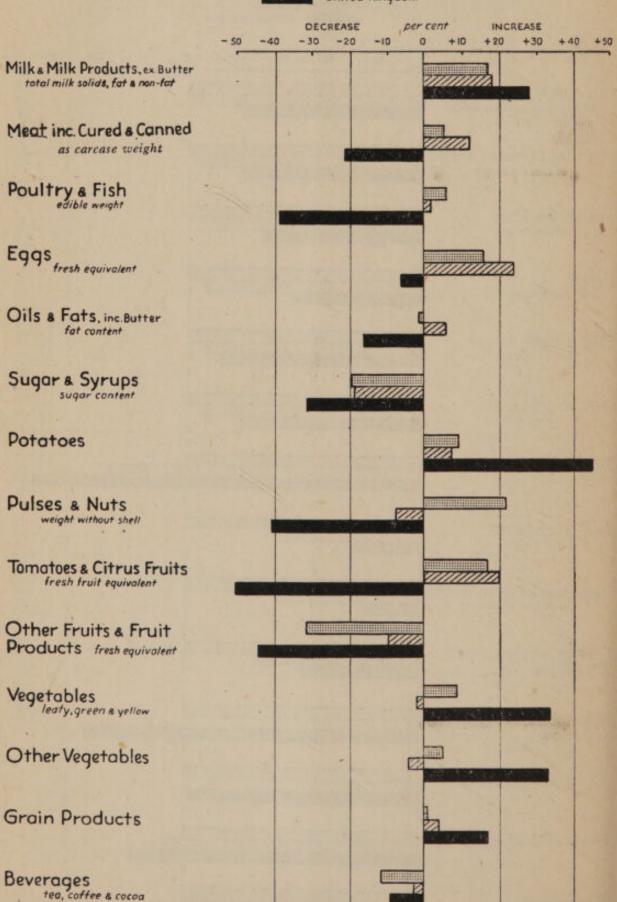


CHART 2.

COMMODITY SUPPLIES PER HEAD MOVING INTO CIVILIAN CONSUMPTION

Percentage change 1943 compared with pre-war.

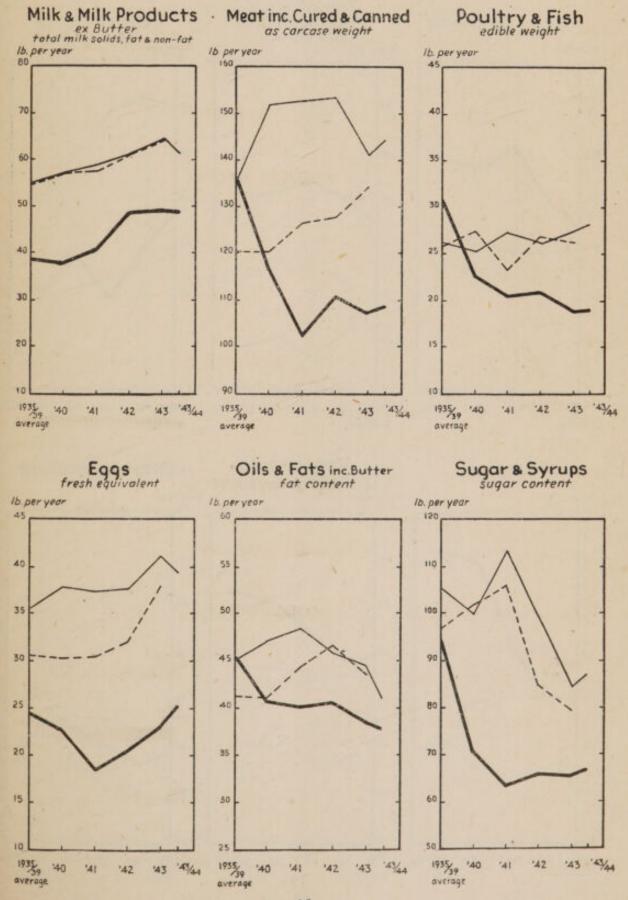




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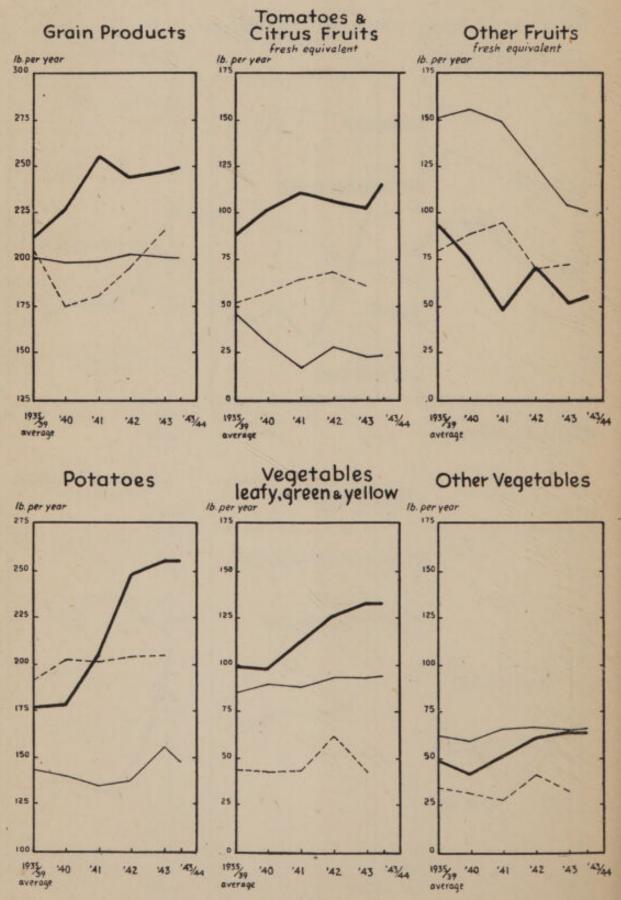
PER CAPITA SUPPLIES MOVING INTO CIVILIAN CONSUMPTION PRE-WAR TO 1943/44 (commodity groups)

United Kingdom ---- Canada ---- United States ----



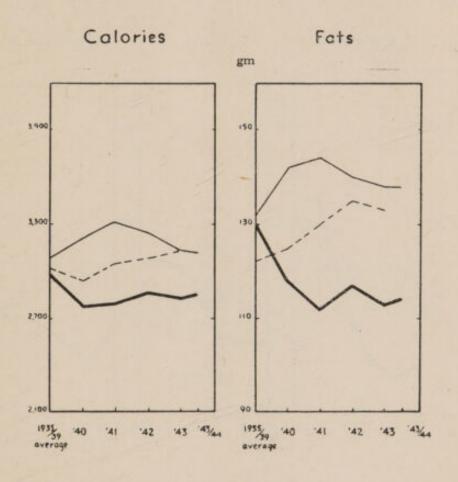
PER CAPITA SUPPLIES MOVING INTO CIVILIAN CONSUMPTION PRE-WAR TO 1943/44 (commodity groups)

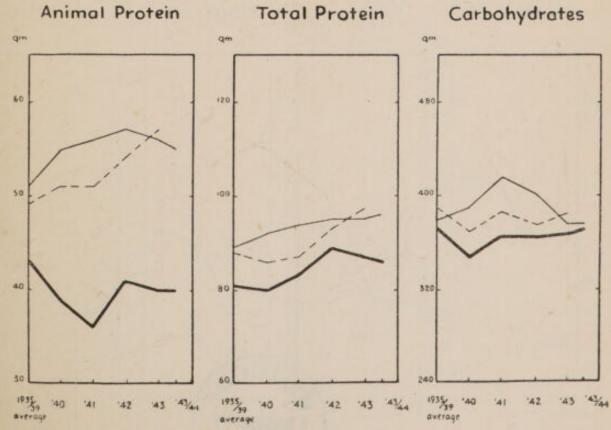
United Kingdom - Canada ---- United States -



DAILY PER CAPITA SUPPLIES MOVING INTO CIVILIAN CONSUMPTION PRE-WAR TO 1943/44 (Nutrients)

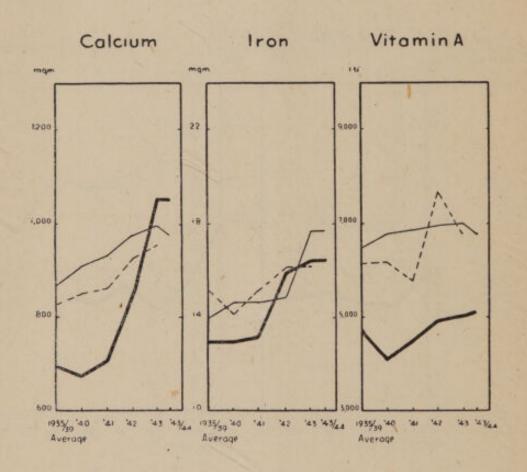
United Kingdom ---- Canada ---- United States ----

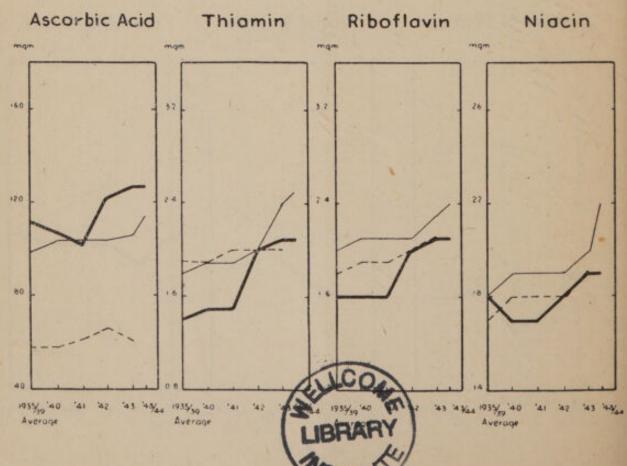




DAILY PER CAPITA SUPPLIES MOVING INTO CIVILIAN CONSUMPTION PRE-WAR TO 1943/44 (Nutrients)

United Kingdom ---- Canada ---- United States ---





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