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FARMERS' BULLETIN 1228
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A
Week's Food
for an
Average
Family



HOUSEKEEPERS often feel the need of some simple plan by which the foods used in their families can be compared in kind and in quantity with those really needed. This calls for some sort of standard that may be used as a guide in the selection of foods for any family at any season of the year and under any market conditions. This bulletin shows by means of pictures a sample weekly food supply for the average family so planned as to come up to these requirements. Every food shown, with the exception of that part of the milk intended for the use of young children, can be replaced by some other food or foods. The text gives suggestions for such substitutions and also a method for comparing the costs of similar foods. It shows, too, how to change the allowances given in the sample food supply so as to meet the needs of families larger or smaller than the average.

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A WEEK'S FOOD FOR AN AVERAGE FAMILY.

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KINDS OF FOOD NEEDED.

THE number of different food materials available in most parts of the United States is very great and is constantly increasing as a result of improved methods of agriculture, the invention of new manufacturing processes, the introduction of foreign food plants, and the cultivation of wild varieties.¹ There is no one of all these many foods that can not be introduced into the diet in such a way as to contribute to its wholesomeness or its attractiveness, but the number of different kinds of food needed is very small. Many food materials, the various cereals for example, serve practically the same purpose in the diet. In fact, most of the foods in common use may, as suggested in other publications of this department,¹ be classified into five groups according to their composition and uses, namely, (1) vegetables and fruits, (2) milk, meat, and other foods depended on for complete or efficient protein, (3) cereals, (4) sugar and sugary foods, and (5) fats and fat foods.

¹ U. S. Dept. Agr., Farmers' Bulletin 808, How to Select Foods: I. What the Body Needs.

A meal, a day's ration, or a weekly food supply made up from representatives of all these five groups is likely to provide all the substances required to make the diet wholesome and attractive, and for this reason the classification should serve as a guide in the selection of foods and the planning of meals. It should be of some help, too, in comparing the cost of different foods, for it separates foods that have little or nothing in common, and brings together under one head food materials that can reasonably be compared in price. For example, to know that a pound of salt codfish costs 10 cents more than a pound of prunes does not make economical meal planning easier. It is helpful, however, to know that one kind of breakfast cereal costs 7 cents, while another that might be substituted for it costs 15 cents, or that a certain amount spent for an inexpensive kind of fruit will bring as good returns in food value as twice that amount spent for some out-of-season variety.

The illustrations for this bulletin are taken from a set of eight charts prepared by the Office of Home Economics to show the principles of food selection. Five of these charts show sample or suggestive weekly food supplies of the five different groups of food mentioned in the preceding paragraph. The information on the other charts, which is chiefly descriptive and explanatory, is also reproduced in this bulletin; but it has been somewhat expanded by the addition of certain details which for lack of space were omitted from the original charts.

GROUP I. VEGETABLES AND FRUITS.

Vegetables and fruits are depended on for flavor, bulk, mineral substances, particularly iron, and for vitamins, of which at least three kinds, called A, B, and C, are now considered necessary. Spinach stands out among the other foods of this group because of its exceptionally large percentage of iron. The green-leaf vegetables as a class, including lettuce, spinach, kale, dandelion greens, the green tops of turnips, or of beets, or of radishes, and many other vegetables commonly used for salads and greens, are especially useful in supplying vitamin A, which is now believed to be necessary for normal growth and for the continued bodily well-being even of adults. Practically all the vegetables and fruits furnish vitamin B, which is, however, so widely distributed among natural food materials that it presents less of a problem to the housekeeper than either of the others. The two chief sources of it are the vegetables and fruits and the so-called whole-grain cereals. Many fruits have been found to supply vitamin C. Lemons, oranges, and tomatoes are considered especially rich in it, and some of the vegetables, notably cabbage and some varieties of turnips, contain compara-

tively large amounts. White potatoes are also considered an important source of this vitamine in the diet, not because they supply much, pound for pound, but because being mild in flavor and comparatively cheap they are used in larger amounts in most families than any other one vegetable.

It is now believed that the vitamins are to some extent destroyed by drying and also by cooking, particularly in the presence of soda. Probably no two foods are affected to the same extent, and even if the effect on every food were known, the facts would be difficult to keep in mind. In the absence of definite available knowledge on this subject it is wise for the housekeeper to use regularly some uncooked fruits or tomatoes, fresh or canned, and some green-leaf vegetables. The last mentioned should be used either raw or cooked only enough to make them taste good and without unnecessary loss of their juices. Canned and dried vegetables and fruits may all be used for the sake of economy or convenience or to give bulk to the diet, but never to the exclusion of green-leaf vegetables and fresh fruits. There is no way at present of measuring the exact amount of fruit juices needed for health. It seems probable, however, that it is not large, and the housekeeper who can not afford to serve whole oranges, grapefruit, or fresh tomatoes is probably on the safe side, if she makes a practice of introducing small amounts of tomato, orange, or lemon juices into her bill of fare. An orange cut up with other fruits or a little lemon juice added to sliced bananas, stewed prunes, or other fresh or dried fruits is helpful. There are many desserts and beverages, too, in which small amounts of orange or lemon juice can be used, and many gravies, sauces, and soups that are improved by a little tomato juice. Regularity of supply is probably more important than the use of large amounts.

GROUP II. FOODS DEPENDED ON FOR EFFICIENT PROTEIN.²

Under the head of foods that furnish efficient protein come milk; eggs; cheeses of various kind; flesh foods, including lean and medium fat meats; fish, poultry, game, and sea foods; peanuts and soy beans. These foods, though differing much in other respects, are alike in furnishing a kind of protein that is capable of replacing the protein found in the tissues of the body. Such foods as bacon, salt pork, fat pork sausage, and cream furnish the same kind of protein as the foods of this group, but far less of it, pound for pound. As a rule, if a food contains two and a half times as much fat as protein, it is listed among the foods of Group V, which are depended on to give richness to the diet rather than to furnish protein.

Milk is especially rich in lime, and meat and eggs in iron. Milk, especially in the summer, and eggs supply vitamine A. In the diet

² U. S. Dept. Agr., Farmers' Bulletin 824, How to Select Foods: III. Foods Rich in Protein.

of the adult all the foods of this group may be considered interchangeable. In the diet of children, however, nothing can take the place of milk.

GROUP III. CEREAL GRAINS AND THEIR PRODUCTS.³

The cereal-grain foods are flour, meal, breakfast foods, bread, rolls, crackers, and all other foods that are made wholly or chiefly from the cereal grains, namely, wheat, corn, rye, rice, barley, and oats. These cereal foods are depended on to supply protein, starch, and, particularly if they are made from the whole grain, mineral substances, and vitamins. Vitamine B is found so near the germ that it is likely to be lost if the germ is removed. The mineral substances are found chiefly in the germ and in the outer coatings of the grain. It is generally agreed that cereal foods keep better if the germ has been removed, and many people prefer white to whole-wheat flour because it makes lighter bread. However, if white bread only is served, care should be taken either to introduce whole-grain cereals into the diet as breakfast foods or in some other way, or to provide an unusually large proportion of vegetables and fruits. (See p. 4.)

GROUP IV. SUGAR AND SUGAR FOODS.

The sugar foods are sugars of different kinds, including granulated, pulverized, lump, brown, and maple; molasses; honey; sirups; candy; sweet chocolate; rich preserves; jellies; jams and marmalades. These foods can be depended on for fuel and flavor, but not for protein, vitamins, and mineral substances. They are therefore not as essential as the other groups. It should be said, however, that sugar at ordinary prices is an economical body fuel and a very economical flavoring material as compared with most extracts and even with spices. If sweets are used in proper proportions to other food materials and are not served in such a way as to destroy the appetite for other foods, they have an important place in the diet.

GROUP V. FATS AND FAT FOODS.

Fats and fat foods include butter, oil, lard, suet, and other table and cooking fats; cream; bacon; salt pork; pork sausage; chocolate; and rich or oily nuts. Most of these foods are prepared by separating fat from natural food materials such as milk, meat, olives, and cotton seed. It is better to use them in this separated form because in this way the richness and flavor that they give to the diet are more easily distributed through the other foods. Some of the fat foods, especially butter and cream, furnish vitamine A and for this reason have great advantage over the other foods of the group, particularly when milk and green-leaf vegetables can not be obtained in sufficient amounts.

³ U. S. Dept. Agr., Farmers' Bulletin 817, How to Select Foods: II. Cereal Foods.

GOOD PROPORTIONS FOR THE DIET.

All of the foods mentioned in the preceding paragraphs, and in fact all foods, furnish body fuel or material that can be burned in the body to give it energy and incidentally to keep up its temperature. The fuel supplied by Group I, the vegetables and fruits, is chiefly sugar and starch; that supplied by Group II, namely, milk, meat, eggs, and cheese, chiefly complete or efficient protein and fat; that supplied by Group III, the cereals, chiefly protein and starch, the latter being usually six or seven times as much by weight as the former; that supplied by Group IV, the sweets, almost exclusively sugar; and that supplied by Group V, almost exclusively fat. As a rule, the diet will be sufficiently bulky and flavorful and will furnish the right proportions of starch, fat, and sugar for the taste of most people if the vegetables and fruits furnish about 20 per cent of the fuel; the milk, meat, eggs, and similar foods, 20 per cent; the cereal foods, 30 per cent; sweets, 10 per cent; and fats and fat foods, 20 per cent. A diet made up on these proportions will also furnish satisfactory kinds and amounts of protein, mineral substances, and vitamins. These proportions have therefore been adopted in making up the sample weekly food supplies of different kinds of foods shown on pages 8 to 16. Many other combinations would answer the purpose equally well.

ENERGY VALUES AS COMPARED WITH WEIGHTS.

It is far more difficult to state briefly and accurately the amounts of foods needed than to enumerate the kinds that should be used. The amounts of foods needed for a given person or family are usually stated in one of two ways: (1) In terms of such familiar units as pounds, bushels, and dozens; or (2) in terms of units by which energy or the power to do work is measured, that is, in calories and hundred-calorie portions. Rules for estimating the amount of food needed in terms of calories and hundred-calorie portions are easy to make but troublesome to follow, for foods are not at present bought or sold by calories or hundred-calorie portions, nor are these units used in recipes. On the other hand, exact rules expressed in terms of pounds, dozens, and other familiar units are very difficult to make. The chief reason for this is that food materials differ greatly, not only in the kinds of nutrients they contain, but also in the amount of water and of inedible material such as bone and shell. Even those foods that serve practically the same purpose in the diet are not interchangeable, pound for pound. For example, a pound of sugar provides 16 ounces of sugar; a pound of honey, about 12 ounces of sugar; and other sweet foods in common use differ even more. It goes without saying that if a family uses candy, sirup, molasses, honey, and rich preserves purchased as such, it can not safely use so much sugar as it

would otherwise; but it is quite impossible to state the total number of pounds of sweets that can be wisely used without knowing which ones are to be selected and in what proportions they are to be used.

For such reasons as those given above, the amounts of the various kinds of foods that are necessary or desirable are stated in two ways in this bulletin, by weight and by hundred-calorie portions. This is done in the belief that estimates in pounds, dozens, and quarts may be more useful to some housekeepers and that estimates in hundred-calorie portions may, because of their greater definiteness, be more useful to others.

In most cases the suggested allowances of foods from a given group are given first in the terms of some familiar member of the group: After that, suggestions are made for the substitution of other foods which serve the same purpose. For example, under Group III it is said that 15 pounds of dry cereal foods, which of course include the flour used in making bread, is a good weekly allowance for the average family. Many people, however, buy bread instead of having it prepared at home, and so the statement is made that a pound of bread usually contains about three-fourths of a pound of flour, and therefore counts as three-fourths of a pound of dry cereal in making up the total allowance.

THE "AVERAGE" FAMILY.

The illustrations show the amount of food needed weekly by the "average" family. This family is supposed to consist of a father and a mother both doing moderately active muscular work and three young children whose ages total as least 20 years but not more than 24 years, or of four "average" adults. The average adult is represented by a man who does little or no muscular work, or by a woman who does hard muscular work like washing or cleaning for 8 hours a day. Boys of 12 years or more and men who do moderately hard muscular work need more than the average; many women need less. The foods pictured, figures 1 to 5, together supply about 80,000 calories, or 800 hundred-calorie portions. Most farm families do more active muscular work and so need more energy than is here allowed for the average family. The needs of other families than the average family may be estimated by means of the table on page 20.

A WEEK'S SUPPLY OF VEGETABLES AND FRUITS FOR AN AVERAGE FAMILY.

A sample weekly supply of vegetables and fruits for the average family is shown in figure 1. This supply represents about 70 pounds fresh weight or about 160 hundred-calorie portions of vegetables and fruits. It is believed that this amount if regularly used will insure

the required bulk and mineral substances, even though some of the vegetables and fruits are canned and some dried; and that it will also furnish the required vitamins, provided green-leaf vegetables



FIG. 1.—U. S. Department of Agriculture chart showing vegetables and fruits, fresh, canned, and dried, which together supply about 160 hundred-calorie portions. Any other combination of ordinary vegetables and fruits equivalent to 70 pounds of fresh material would supply about the same amount of body fuel.

and fresh fruits are regularly included in small amounts. The separate items in the sample supply are as follows:

	Pounds.		Pounds.
Fresh vegetables and fruits:		Fresh vegetables and fruits—Con.	
Potatoes, white, $\frac{1}{2}$ peck.....	7	Apples, 8 medium-sized.....	3
Potatoes, sweet, $\frac{1}{2}$ peck.....	7	Pineapple (1).....	2
Asparagus.....	2	Strawberries, 1 quart.....	1
Beets, with greens.....	2	Total.....	<u>44</u>
Carrots.....	2	Canned vegetables and fruits:	
Cabbage.....	2	Peas, 1 quart.....	2
Squash.....	2	String beans, 1 quart.....	2
Turnips.....	2	Cherries, 1 quart.....	2
Celery.....	1	Peaches, 1 quart.....	2
Lettuce.....	1	Total.....	<u>8</u>
Onions.....	2	Dried vegetables and fruits:	
Tomatoes, 4 medium-sized.....	1	Lima beans.....	2
Rhubarb.....	1	Raisins.....	1
Bananas, 1 dozen medium-sized.....	3	Total.....	<u>3</u>
Oranges, $\frac{1}{2}$ dozen medium-sized.....	3		

HOW TO ESTIMATE THE NUMBER OF POUNDS FRESH WEIGHT.

When all the vegetables and fruits used are fresh it is easy to estimate the weight, but when some are dried and some are canned it may be difficult. Vegetables and fruits lose on the average about five-sixths of their weight when they are dried, the loss being sometimes due to the removal of inedible portions, but chiefly to the passing off of water. A given number of pounds, dried, therefore, is likely to furnish as much fuel and mineral substances as six times that number of pounds fresh. A given number of pounds of canned vegetables and fruits, on the other hand, seldom corresponds in fuel and mineral substances to more than the same number of pounds fresh or as purchased, i. e., before skins, seeds, pods, outer leaves, and other inedible portions have been removed. In making up the sample supply of vegetables and fruits in the picture, it was estimated that the 8 pounds of canned peas, string beans, cherries, and peaches correspond roughly with 8 pounds of these same foods fresh, and that the 3 pounds of dried lima beans and raisins correspond roughly with 18 pounds of fresh lima beans and grapes. The 44 pounds of fresh vegetables and fruits, the 8 pounds canned, and the 3 pounds dried together represent, roughly, 70 pounds fresh weight.

This method of estimating the original or fresh weight of the vegetables and fruits used in the course of a week is recommended to the housekeeper who wishes to keep her food supply up to the standard. Dried and canned vegetables and fruits can never wholly take the place of fresh vegetables and fruits; but if only a small part of the 70 pounds can be obtained in fresh form, it is better to make up the remainder in the form of dried and canned products than to reduce the total.

HOW TO ESTIMATE THE ENERGY VALUE OF THE VEGETABLES AND FRUITS.

The fuel or energy values per pound of the different vegetables and fruits differ considerably, but from dietary studies made in the Office of Home Economics it has been found that the fresh and canned vegetables and fruits in the variety in which they are used in most families seldom represent less than 225 calories, or 2¼ hundred-calorie portions per pound, and that the dry vegetables and fruits seldom represent less than 1,350 calories, or 13½ hundred-calorie portions per pound. According to these figures the fresh and canned vegetables and fruits in the sample weekly supply should furnish at least 117 hundred-calorie portions and the dried at least 40½ hundred-calorie portions, making a total of 157½ hundred-calorie portions for the group, or about 20 per cent of the total 800 hundred-calorie portions needed. In this way the amount of fuel furnished by the vegetables

and fruits in any food supply and the proportion of this fuel to the total fuel needed can be quickly estimated.

A WEEK'S FOOD SUPPLY OF EFFICIENT-PROTEIN FOODS FOR AN AVERAGE FAMILY.

Figure 2 shows a sample weekly food supply of milk and other foods depended on for efficient protein such as would be needed by the average family. The supply includes 14 quarts of milk and 10½

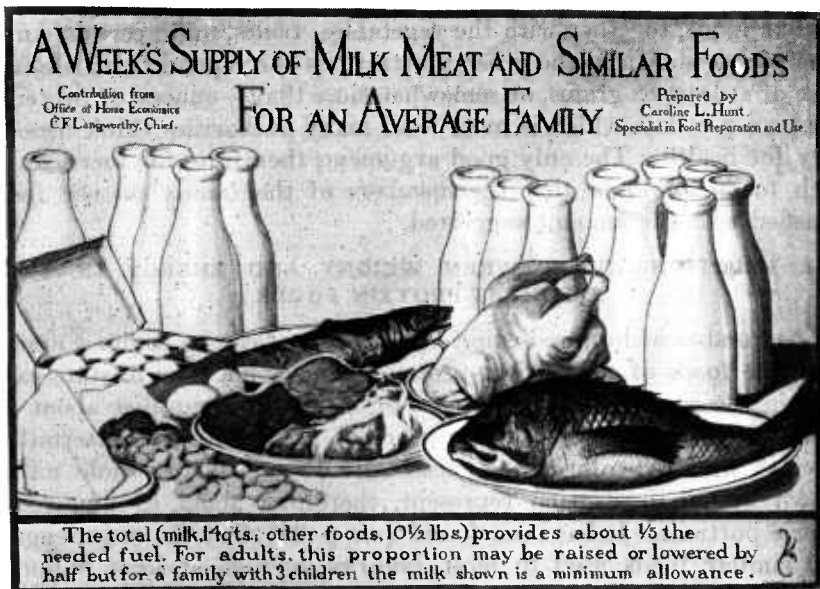


FIG. 2.—U. S. Department of Agriculture chart showing efficient-protein foods which together supply 160 hundred-calorie portions. Any other combination, consisting of 14 quarts of milk and 10½ pounds of flesh foods, cheese, and eggs, would furnish about the same amount of body fuel.

pounds of flesh foods, cheese, eggs, and peanuts, or about 160 hundred-calorie portions, of which about half are supplied by the milk. The separate items are as follows:

	Quarts.		Pounds.
Milk -----	14	Cheese -----	¾
	<hr style="width: 50px; margin: 0 auto;"/>	Eggs, 1 dozen -----	1½
	Pounds.	Peanuts, 1 quart -----	½
Beef, sirloin -----	2		
Fowl -----	3	Total -----	10½
Fish, fresh, lean -----	2		
Fish, dried -----	¾		

Children need more milk than adults, and the number of quarts that should be used depends on the family. The 14 quarts shown in the picture is believed to be as little as is safe for a family of 2 adults and 3 children. For this family 3 quarts a day, or 21 quarts a week, would be a better allowance, and would furnish daily 3 glasses for

each child and a small amount for general use. Since the added quart of milk would be chiefly for children, it would hardly be practicable to reduce the other foods much. A family of four adults would probably use less milk than the amount shown in the picture and more meat, cheese, and eggs. For such a family 1 quart of milk and 2 pounds of the other foods would be a more usual daily allowance.

The amount of meat and other flesh foods shown in the figure is doubtless less than that used in most families whose incomes allow them to select the foods they desire. The meat, eggs, cheese, and similar foods, together with the vegetables, fruits, milk, cereals, and other foods shown in the other illustrations correspond to an allowance of at least 88 grams, or somewhat more than 3 ounces, of protein per man per day, which is more than many authorities think necessary for health. The only good argument, therefore, for increasing such foods would be that the members of the family do not feel satisfied with the amount suggested.

THE RELATIONSHIP BETWEEN WEIGHT AND ENERGY IN THE EFFICIENT-PROTEIN FOODS.

The number of hundred-calorie portions that can be counted upon from the foods of the efficient-protein group is not easy to state except in the case of milk. A quart of whole milk supplies about 6 hundred-calorie portions and a quart of skim milk or buttermilk about 3 hundred-calorie portions. The 14 quarts of whole milk shown in the illustration represent, therefore, about 84 hundred-calorie portions. It has been found (see p. 22) that the meat, eggs, and similar foods used in most families average at least 8 hundred-calorie portions per pound. The foods in the illustration, some of which are fat and some lean, were chosen to correspond with this average and to supply about 85 hundred-calorie portions. It is true that the flesh foods, eggs, cheese, etc., used in the course of a week in a given family may represent less fuel than this per pound. They certainly will if they consist chiefly of fresh fish, chicken, or eggs, all of which are below the average in energy value. On the other hand, they will represent more than 8 hundred-calorie portions per pound if they consist chiefly of pork, lamb, cheese, or peanut butter, all of which are above the average. During the course of a month or a year, however, it is safe to count on an average of at least 8 hundred-calorie portions per pound from foods of this kind.

A WEEK'S SUPPLY OF CEREAL FOODS FOR AN AVERAGE FAMILY.

A sample weekly supply of cereal foods for the average family is shown in figure 3. This supply corresponds to about 15 pounds of dry

cereals, such as flour, meal, and ready-to-eat breakfast foods, and supplies about 240 hundred-calorie portions. It is believed that if this amount of cereal foods is used regularly in addition to the vegetables, fruits, milk, meat, and other foods shown in the figures on pages 9 and 11, the diet will be sure to supply enough protein and the proportion of starch to sugar and fat will make it palatable. Many well-

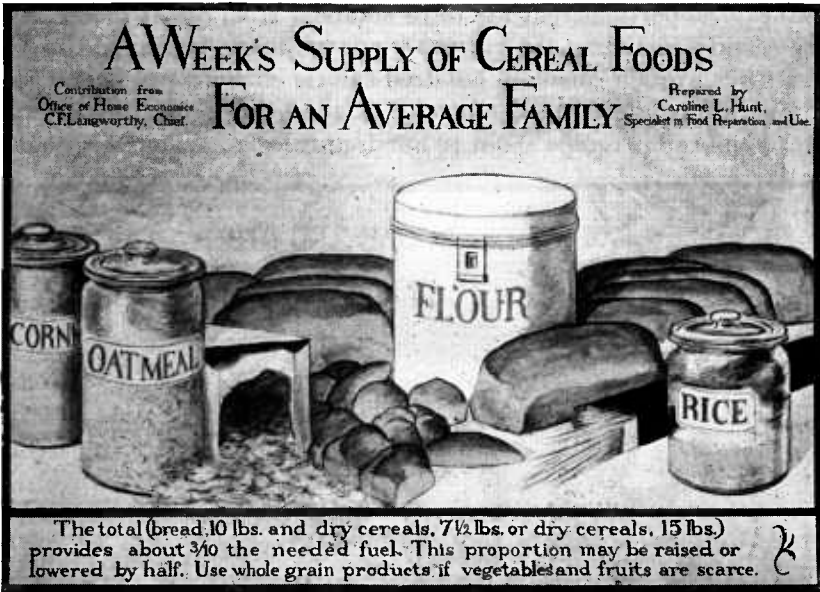


FIG. 3.—U. S. Department of Agriculture chart showing bread and other cereal foods which together supply about 240 hundred-calorie portions. Any other combination of cereal foods equivalent to 15 pounds of dry cereal would furnish about the same amount of body fuel.

to-do families, however, prefer less cereals and more meat. The separate items are as follows:

	Pounds.		Pounds.
Flour, 20 cups-----	5	Ready-to-eat breakfast cereal, 5 to 6 cups-----	1/2
Rolled oats, 2 1/2 cups to 3 cups-----	1/2		
Corn meal, 1 1/2 cups-----	1/2		
Rice, 1 cup-----	1/2	Total-----	7 1/2
Macaroni-----	1/2	Bread and rolls-----	10

HOW TO ESTIMATE THE TOTAL AMOUNT OF CEREALS USED.

Some families make their own bread, some buy bread, and some buy part and make part. Every pound of bread contains approximately three-fourths of a pound of flour. The housekeeper can, therefore, make a rough estimate of the amount of cereal food she uses by adding three-fourths of the weight of bread she buys to the weight of the flour, oatmeal, and other dry cereal food she used in cooking. Take the foods in the picture for illustration. There are 10 pounds of

bread and rolls representing three-fourths as much flour, or about $7\frac{1}{2}$ pounds. This added to the $7\frac{1}{2}$ pounds of dry cereals makes a total of 15 pounds.

HOW TO ESTIMATE THE NUMBER OF HUNDRED-CALORIE PORTIONS IN CEREAL FOOD.

It is a comparatively easy matter to estimate the number of hundred-calorie portions that are to be obtained from cereal foods. The dry cereals, including the various kinds of flours, meals, and breakfast foods average about 16 hundred-calorie portions per pound, and no one kind differs much one way or the other from the average. Bread and rolls average about 12 hundred-calorie portions per pound.



FIG. 4.—U. S. Department of Agriculture chart showing sugar and other sweet foods which together supply about 80 hundred-calorie portions. Any other combination of such foods which furnishes about $4\frac{1}{2}$ pounds of sugar would furnish about the same amount of body fuel.

Take the cereal foods shown in the picture as an illustration. The dry cereals may be expected to furnish $7\frac{1}{2} \times 16$ hundred-calorie portions and the bread 10×12 hundred-calorie portions, making a total of 240 hundred-calorie portions. In this way the fuel value of any combination of cereal foods can be quickly estimated.

A WEEK'S SUPPLY OF SWEETS FOR AN AVERAGE FAMILY.

Figure 4 shows a sample weekly supply of sweets for an average family. These sweets represent about $4\frac{1}{2}$ pounds of sugar or about 80 hundred-calorie portions. It is believed that this amount of

sweets if used regularly will contribute to the attractiveness of the diet without interfering with the use of the required amount of protein, mineral substances, and vitamins. The separate items are as follows:

	Pounds.		Pounds.
Sugar, granulated, 4 cups-----	2	Sirup, about $\frac{3}{4}$ cup-----	$\frac{1}{2}$
Sugar, loaf-----	$\frac{1}{4}$	Molasses, about $\frac{2}{3}$ cup-----	$\frac{1}{2}$
Candy-----	$\frac{3}{4}$	Jelly-----	$\frac{1}{2}$
Honey, about $\frac{3}{4}$ cup-----	$\frac{1}{2}$		

HOW TO ESTIMATE THE AMOUNT OF SUGAR IN SWEETS.

Granulated, lump, pulverized, and brown sugars, though differing in texture or flavor, are practically all alike in composition; they contain little or nothing but sugar. A pound of candy may be considered the equivalent in fuel value of a pound of sugar. Water, which has no fuel value, is used in making candy, to be sure, but so too are chocolate and nut meats, which have higher fuel values than sugar. The average fuel value per pound of candies of various kinds is, therefore, about the same as that of sugar. The amount of sugar in thick sirups, such as honey and molasses, is about three-fourths of a pound to the pound, and in jellies, jams, and rich preserves, about one-half of a pound to the pound. This makes it possible to estimate quickly the total amount of sugar used, whether in the form of sugar itself or in the form of candy, sirups, or preserves. Take the sweets shown in the picture as an illustration. There are $2\frac{1}{4}$ pounds of sugar itself and three-fourths of a pound of candy, together corresponding to a total of about 3 pounds of sugar. The honey, sirup, and molasses together weigh $1\frac{1}{2}$ pounds, of which about three-fourths, or 18 ounces, is sugar. The jelly weighs one-half pound, and of this about half, or 4 ounces, is sugar. This makes a total of about $4\frac{1}{2}$ pounds of sugar.

HOW TO ESTIMATE THE NUMBER OF HUNDRED-CALORIE PORTIONS IN THE SWEETS.

Sugar itself provides 18 hundred-calorie portions per pound and average candy about the same number. Thick sirups provide about $13\frac{1}{2}$ hundred-calorie portions, and jelly, jams, marmalades, and rich preserves about 9 hundred-calorie portions per pound. With these figures in mind, it is easy to estimate the number of hundred-calorie portions to be obtained from the sweets even when these foods are used in great variety. Take the sweets in the illustration on page 14 as an example. The 3 pounds of sugar and candy may be expected to furnish about 54 hundred-calorie portions; the $1\frac{1}{2}$ pounds of thick sirups (honey, sirup, and molasses) about $20\frac{1}{4}$ hundred-calorie portions, and the one-half pound of jelly about $4\frac{1}{2}$ hundred-

calorie portions. This makes a total of nearly 80 hundred-calorie portions, or about one-tenth of the fuel needed weekly by the average family.

A WEEK'S SUPPLY OF FATS AND FAT FOODS FOR AN AVERAGE FAMILY.

Figure 5 shows a sample weekly food supply of fats and fat foods for the average family. These foods correspond with about 4 pounds of pure fat and represent about 160 hundred-calorie portions. It is believed that this amount of fat, in addition to that

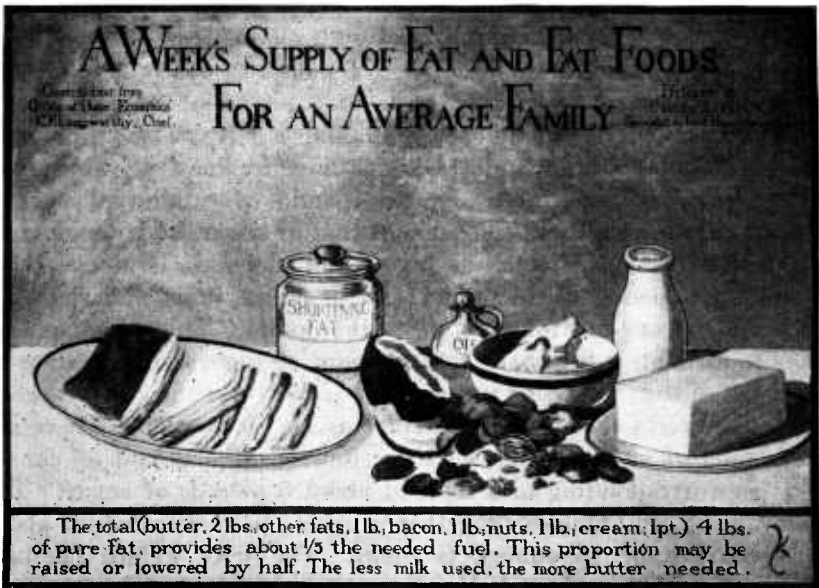


FIG. 5.—U. S. Department of Agriculture chart showing fat and fat foods which together supply about 160 hundred-calorie portions. Any other combination of such foods equivalent to about 4 pounds of fat would furnish about the same amount of body fuel.

supplied by the milk, meat, and similar foods suggested, will make the diet sufficiently rich to taste good. It is believed, also, that the amount of butter, cream, and suet shown will, if used in connection with the milk and green vegetables elsewhere recommended, be enough to keep up the supply of vitamine A. The separate items are as follows:

Pound.		Pounds.		Pounds.	
Oil, $\frac{1}{2}$ cup.....	$\frac{1}{2}$	Butter.....	2	Cream, 1 pint.....	1
Shortening fat, 1 cup.....	$\frac{1}{2}$	Bacon.....	1	Nuts in shell.....	1
Suet.....	$\frac{1}{2}$				
		Total.....	3	Total.....	2
Total.....	1				

HOW TO ESTIMATE THE AMOUNT OF FAT IN THE FATS AND FAT FOODS.

Oil, suet, lard, and drippings may be considered to be all fat; butter, bacon, salt pork, chocolate, and fat nut meats may be considered to be at least three-fourths fat; and cream and nuts in the shell may be considered to be one-fourth fat. With these figures in mind it is possible to estimate the amount of fat in the fat foods, whether these foods are chiefly butter or chiefly cream, oils, nuts, or other foods commonly used to enrich the diet. Take the foods in the picture for example. The pound of oil, shortening fat, and suet may be considered all fat. The fat in butter and bacon may be considered to be about $2\frac{1}{4}$ pounds, or three-fourths of their total weight, while the fat in the cream and nuts in the shell may be considered to be 8 ounces, or one-fourth of their total weight. This makes a total of nearly 4 pounds of fat in all.

HOW TO ESTIMATE THE NUMBER OF HUNDRED-CALORIE PORTIONS IN THE FAT AND FAT FOODS.

Pure fat has a fuel value of about 4,000 calories per pound. Butter furnishes about 34 hundred-calorie portions per pound. Bacon, salt pork, chocolate, and fat nut meats average about 28 hundred-calorie portions, and cream and nuts in the shell about 10 hundred-calorie portions per pound. With these figures in mind it is possible to estimate quickly the number of hundred-calorie portions of fat and fat foods shown in the sample weekly supply as not far from 160 hundred-calorie portions, and the same method can be used in estimating the fat in any other list of fats or fat foods.

MEAL PLANNING.

Up to this point, emphasis has been laid on the kinds and relative amounts of foods in the weekly supply, and no mention has been made of the make-up of the separate meals. This was done in the belief that a balanced food supply insures a balanced diet. The common way of using such foods as those shown in the pictures is by serving one or more foods from each of the five groups at each meal. Many people eat for breakfast: Fruit (Group I); either a cereal with milk, or an egg, or warmed-over meat or fish on toast or with bread (Groups II and III); butter or bacon (Group V); and sugar, marmalade, or both (Group IV). The usual bill of fare for lunch or supper includes meat, sliced cold or warmed over, or cheese, or eggs in some form, or a milk soup or chowder (Group II); bread or crackers (Group III); butter or oil (Group V); a green salad or sliced fruit (Group I), and sugar or a sweet of some other kind

(Group IV). Dinner usually consists of meat or one of the so-called meat substitutes (Group II); potatoes and one other vegetable (Group I); bread and butter (Groups III and V); and a sweet of some kind for dessert (Group IV); or bread without butter (Group III) and a rich dessert (Groups IV and V).

Some housekeepers like to do a certain amount of "balancing" as they go along and to serve at least one food from each group at every meal, but this is not necessary. There is no objection in the case of an adult to a breakfast of toast, butter, and coffee, tea, or cocoa (chiefly Groups III and V), if enough vegetables, fruits, and efficient-protein foods are supplied at later meals. Nor is there any reason to think that serious injury would be done by the omission of any one group of food for a whole day, or even longer. For this reason, emphasis has been placed chiefly on the importance of keeping account of the foods served in the course of a week rather than of those in every meal.

Another point to be remembered is that meals are not necessarily well balanced, even if they contain representatives of all the food groups, for much depends on the proportions in which these foods are used. A dinner which includes meat, and also a dessert made of milk and eggs, such as custard or ice cream is likely to supply far more of the efficient protein foods than needed, an important matter since these are among the most expensive food materials. Nor is it possible to judge from the dishes served whether a meal is balanced or not. For example, a meal that includes no meat course, but has in its place only bread and butter with vegetables or fruits may be well-balanced if the dessert is such a dish as old-fashioned rice pudding which has milk for its chief ingredient. If the weekly food supply is satisfactory the exact make-up of the separate meals is not important, though the habit of providing all the required kinds of foods regularly is helpful and likely to save time and thought.

SUGGESTED BILLS OF FARE.

Bills of fare for a week that could be made from the food supply shown in the pictures are given below. It should be remembered that this food supply was planned for an "average" family (see p. 8), and that it should perhaps be modified by increasing or decreasing the amount of milk according to the number of children and adults in the family. When more milk is provided for the young children this would partially take the place of the meat, fish, cheese, or egg dishes.

SUNDAY.

BREAKFAST.

Oranges; breakfast cereal with milk; bread or toast with butter.

DINNER.

Chicken⁴ stuffed and roasted or fricasseed and served on toast or with rice; sweet potatoes; asparagus; jelly; bread; pineapple ice cream.

LUNCH OR SUPPER.

Peanut sandwiches with lettuce salad; or bread, milk, and butter for children; candy.

MONDAY.

BREAKFAST.

Sliced pineapple and bananas; breakfast cereal with milk; bread or toast with butter.

DINNER.

Macaroni and cheese⁴ with warmed-over chicken; boiled cabbage; bread; apple pudding, baked or steamed.

LUNCH OR SUPPER.

Lima bean chowder; crackers or bread and butter; celery; boiled rice with honey.

TUESDAY.

BREAKFAST.

Canned peaches; breakfast cereal with milk; bread or toast with butter.

DINNER.

Beef stew⁴ with turnips, carrots, onions, and dumplings; bread; orange custard with nut cookies or sliced oranges with nut cake.

LUNCH OR SUPPER.

Bacon; boiled potatoes and milk gravy made with bacon fat; cole-slaw; bread and butter; candy.

WEDNESDAY.

BREAKFAST.

Canned cherries; breakfast cereal with milk; bread or toast with butter.

DINNER.

Bacon and fried eggs;⁴ potatoes; squash; bread; peach pie.

LUNCH OR SUPPER.

Creamed smoked fish with baked potatoes; bread and butter; sliced oranges with coconut.

THURSDAY.

BREAKFAST.

Bananas; breakfast cereal with milk; bread or toast with butter.

DINNER.

Meat cakes⁴ with tomato sauce; lima beans; bread; baked bananas.

LUNCH OR SUPPER.

Cheese sandwiches or scalloped cheese and rice;⁴ lettuce; bread and butter; wheat cakes with sirup.

FRIDAY.

BREAKFAST.

Stewed raisins and rhubarb; breakfast cereal with milk; bread or toast with butter.

DINNER.

Fish, stuffed or baked;⁴ sweet potatoes; beets with greens; bread; suet pudding with raisins.

LUNCH OR SUPPER.

Cream of pea soup; scalloped sweet potatoes; bread or biscuits and butter; canned cherries.

SATURDAY.

BREAKFAST.

Baked apples; breakfast cereal with milk; bread or toast with butter.

DINNER.

Scrambled eggs with smoked fish;⁴ string beans; celery; bread and butter; strawberry shortcake.

LUNCH OR SUPPER.

Creamed fish on toast or boiled rice; bread and butter; raisin tarts.

⁴ Bread and milk instead of this for young children.

COMPARING ONE'S OWN FAMILY WITH THE "AVERAGE" FAMILY.

On page 8 the statement is made that the average family needs about 800 hundred-calorie portions a week. This would be about 114 a day. The number of hundred-calorie portions needed by any family can be estimated roughly by reference to the table given below. Such an estimate will provide a means for comparing the allowances for any given family with the allowances given in this bulletin for the average family. For illustration, suppose a family consists of one man who does little muscular work; two women, one of whom does little muscular work, the other hard muscular work; an active boy 16 years of age, and three children, 11, 8, and 4 years of age. These persons would require, respectively, about 200, 150, 200, 280, 140, 120, and 100 hundred-calorie portions a week, which make a total of about 1,200 hundred-calorie portions, or 50 per cent more than that needed by the average family. All of the allowances given in this bulletin, therefore, would have to be increased by half. The medium cereal allowance would then be about 22 pounds a week instead of 15, the medium fat allowance 6 instead of 4 pounds, and so on through the groups.

Energy needs of different individuals.

[Hundred-calorie portions.]

Individual.	Per day.	Per week.
The average person over 12 years of age.....	27	200
A man or boy using much muscular energy in work or play.....	40	280
A man or boy using little or no muscular energy in work or play.....	27	200
A woman or girl using much muscular energy in work or play.....	27	200
A woman or girl using little or no muscular energy in work or play.....	22	150
A boy or girl between 10 and 12 years of age, at least.....	20	140
A boy or girl between 6 and 9 years of age, at least.....	17	120
A boy or girl between 2 and 5 years of age, at least.....	14	100

The above amounts represent the gross allowance which should be made in the family food supply for the different individuals described, and provide for some waste. The amount actually eaten is usually 5 to 10 per cent less than the amount supplied.

CUTTING DOWN THE COST OF A WEEK'S FOOD SUPPLY.

The amounts of foods given in the preceding part of this bulletin (namely, 70 pounds of vegetables and fruits, fresh weight, or 160 hundred-calorie portions of vegetables and fruits, fresh, canned, and dried; 14 quarts, or 84 hundred-calorie portions of milk; 10½ pounds, or 84 hundred-calorie portions, of flesh foods, eggs, and cheese; 15 pounds of cereal, dry weight, or 240 hundred-calorie portions of

cereal foods; 4½ pounds of sugar, or 80 hundred-calorie portions of sweets; and 4 pounds of fat, or 160 hundred-calorie portions of fat foods) may be depended on to supply enough fuel for the average family per week and to make an attractive diet. For economy's sake, however, it is often necessary to take into account the separate as well as the average values of the foods of the different groups. The following table is therefore given to show the fuel values in terms of approximate hundred-calorie portions of many of the common food materials as purchased:

Approximate number of hundred-calorie portions in common food materials.

GROUP I. VEGETABLES AND FRUITS.

Materials.	Number of hundred-calorie portions.	Materials.	Number of hundred-calorie portions.
Vegetables, fresh:		Vegetables, canned—	
Asparagus.....	1 per pound.	Continued.	
Beans, lima, shelled.....	5½ per pound.	Tomatoes.....	1 per pound.
Do.....	7 per quart.	Do.....	1½ per No. 2 can.
Beans, string.....	1½ per pound.	Peas.....	2½ per pound.
Do.....	1½ per quart.	Do.....	3 per No. 2 can.
Beets.....	1½ per pound.	Vegetables, dried:	
Cabbage.....	1 per pound.	Beans.....	15½ per pound.
Do.....	3 per medium-sized head	Cowpeas.....	15½ per pound.
	(3 pounds).	Peas.....	16 per pound.
Carrots.....	1½ per pound.	Fruits, fresh:	
Cauliflower.....	1½ per pound.	Apples.....	2 per pound.
Do.....	2 per medium-sized head	Do.....	24 per peck.
	(1½ pounds).	Bananas.....	3 per pound.
Celery.....	¾ per pound.	Do.....	11 per dozen medium-
Corn.....	1½ per pound.		sized.
Do.....	11 per dozen medium-	Cherries.....	3½ per pound or per quart.
	sized ears.	Cranberries.....	2 per pound or per quart.
Cowpeas, shelled.....	6 per pound.	Currants.....	2½ per pound or per quart.
Cucumbers.....	¾ per pound.	Grapes.....	3½ per pound or per quart.
Do.....	¼ per medium-sized cu-	Huckleberries.....	3½ per pound or per quart.
	cumber.	Lemons.....	1½ per pound.
Lettuce.....	¾ per pound.	Do.....	4½ per dozen medium-
Do.....	¼ per medium-sized head.		sized.
Mushrooms.....	2 per pound.	Muskmelon.....	1 per pound or 1 per medium-
Okra.....	1½ per pound.		sized.
Onions.....	2 per pound.	Oranges.....	1½ per pound or 10 per
Parsnips.....	2½ per pound.		dozen medium-sized.
Peas.....	2½ per pound.	Peaches.....	1½ per pound, 6 per dozen.
Do.....	20 per peck.	Pears.....	2½ per pound.
Potatoes, Irish.....	3 per pound.	Plums.....	3½ per pound.
Do.....	45 per peck.	Raspberries.....	3 per pound or per quart.
Potatoes, sweet.....	4½ per pound.	Strawberries.....	1½ per pound or per quart.
Do.....	63 per peck.	Watermelon.....	¼ per pound.
Pumpkin.....	½ per pound.	Fruits, canned:	
Radishes.....	1 per pound.	Cherries.....	4 per pound.
Rhubarb.....	¾ per pound.	Do.....	5 per No. 2 can.
Spinach.....	1 per pound.	Peaches.....	2 per pound.
Do.....	5 per peck.	Do.....	2½ per No. 2 can.
Squash.....	1 per pound.	Pears.....	3½ per pound.
Tomatoes.....	1 per pound.	Do.....	4½ per No. 2 can.
Turnips.....	1½ per pound.	Pineapples.....	7 per pound.
Turnip tops.....	2 per pound.	Do.....	4½ per No. 2 can.
Vegetables, canned:		Fruits, dried:	
Beans, string.....	1 per pound.	Apples.....	13 per pound.
Do.....	1½ per No. 2 can.	Dates.....	14 per pound.
Beans, baked.....	6 per pound.	Figs.....	14½ per pound.
Do.....	7 per No. 2 can.	Prunes.....	11½ per pound.
Corn.....	4½ per pound.	Raisins.....	14 per pound.
Do.....	6 per No. 2 can.	Fruits, miscellaneous:	
		Olives, green or ripe.....	10 per pound or per pint.

Approximate number of hundred-calorie portions in common food materials—Continued.

GROUP II. FOODS DEPENDENT UPON FOR EFFICIENT PROTEIN.

Materials.	Number of hundred-calorie portions.	Materials.	Number of hundred-calorie portions.
Dairy products:		Fish, fresh:	
Milk, whole.....	3 per pound or 6 per quart.	Bass.....	2 per pound.
Milk, skim.....	3 per quart.	Codfish.....	1½ per pound.
Buttermilk.....	3 per quart.	Halibut, steak.....	4½ per pound.
Milk, condensed, un-sweetened.....	6½ per pound or per quart.	Mackerel, Spanish.....	3½ per pound.
Milk, powdered, whole.....	23 per pound.	Perch.....	2 per pound.
Milk, powdered, skim.....	16 per pound.	Salmon.....	6 per pound.
Cheese, ordinary.....	19½ per pound.	Shad.....	3½ per pound.
Cheese, cottage.....	5 per pound.	Shad roe.....	6 per pound.
Eggs.....	9 per dozen.	Smelts.....	2½ per pound.
Meats:		Trout, brook.....	2½ per pound.
Beef, average.....	10 per pound.	Fish, smoked or salted:	
Beef, chuck.....	7½ per pound.	Cod, salt (boneless).....	5 per pound:
Beef, corned.....	12½ per pound.	Halibut, smoked.....	9 per pound.
Beef heart.....	13 per pound.	Herring, smoked.....	7½ per pound.
Beef liver.....	5½ per pound.	Mackerel, salt.....	10 per pound.
Beef ribs.....	11 per pound.	Fish, canned:	
Beef, round.....	7½ per pound.	Salmon.....	6½ per pound.
Beef, sirloin.....	9½ per pound.	Sardines.....	9 per pound.
Beef tongue.....	5½ per pound.	Tuna fish.....	9½ per pound.
Lamb, average.....	10 per pound.	Shellfish, fresh:	
Lamb, leg.....	11 per pound.	Lobster.....	1½ per pound.
Lamb, loin.....	13 per pound.	Oysters.....	2 per pound.
Mutton, average.....	12 per pound.	Do.....	4 per quart.
Pork, average.....	22 per pound.	Scallops.....	3½ per pound.
Pork, ham.....	16 per pound.	Shellfish, canned:	
Veal, average.....	5½ per pound.	Lobster.....	4 per pound.
Poultry:		Shrimps.....	5 per pound.
Chicken, broilers.....	3 per pound.	Legumes:	
Fowl.....	7½ per pound.	Peanuts, unshelled.....	19 per pound.
		Peanuts, shelled.....	11 per quart.
		Do.....	25 per pound.
		Peanut butter.....	27½ per pound.
		Soy beans, dried.....	20 per pound.

GROUP III. CEREAL FOODS.

Bread.....	12 per pound.	Macaroni.....	16 per pound.
Do.....	9 per loaf, 16 oz. dough, 12-14 oz. baked.	Oatmeal.....	18 per pound.
Cereals, flaked.....	15 per pound.	Rice.....	16 per pound.
Corn meal.....	16 per pound.	Rolls.....	12 per pound.
Crackers.....	19 per pound.	Rolls, 2-ounce size.....	18 per dozen.
Flour, wheat.....	16 per pound.	Tapioca.....	16 per pound.
Flour, buckwheat.....	16 per pound.	Wheat, shredded.....	16½ per pound.

GROUP IV. SUGARS AND SUGARY FOODS.

Candy, average.....	17 per pound.	Sirup, corn.....	54 per quart.
Honey.....	15 per pound.	Sirup, maple.....	49 per quart.
Do.....	55 per quart.	Sugar, granulated.....	18 per pound.
Molasses.....	13 per pound.	Sugar, maple.....	15 per pound.
Do.....	50 per quart.	Chocolate, milk.....	22½ per pound.
Sirup, corn.....	14½ per pound.	Chocolate, sweet.....	22 per pound.

GROUP V. FATS AND FAT FOODS.

Fats, table and cooking:		Nuts—Continued.	
Butter.....	34 per pound.	Butternuts, unshelled.....	4 per pound.
Lard.....	41 per pound.	Butternuts, shelled.....	32 per pound.
Oil.....	41 per pound.	Coconut in shell, without milk.....	14 per pound.
Suet.....	34 per pound.	Hickory nuts, unshelled.....	12 per pound.
Cream, 18 per cent.....	9 per pound or per pint.	Hickory nuts, shelled.....	33 per pound.
Cream, 40 per cent.....	17 per pound or per pint.	Pecans, unshelled.....	17 per pound.
Fat meats:		Pecans, shelled.....	33 per pound.
Bacon.....	26 per pound.	Walnuts, California, unshelled.....	8½ per pound.
Pork, salt.....	28½ per pound.	Walnuts, California, shelled.....	32 per pound.
Pork sausage.....	21 per pound.	Chocolate.....	28 per pound.
Nuts:			
Almonds, unshelled.....	16 per pound.		
Almonds, shelled.....	29 per pound.		
Brazil nuts, unshelled.....	16 per pound.		
Brazil nuts, shelled.....	32 per pound.		

From the figures in the table and from the market prices of foods, the cost of a hundred-calorie portion of any food can be determined, and the cost of the various foods that serve the same purposes in the diet can be compared.

Take, for example, ordinary cheese, which provides 19 hundred-calorie portions per pound, and average beef, which provides 10 hundred-calorie portions per pound. When cheese sells for 38 cents a pound it costs 2 cents per hundred-calorie portion, and beef of average composition would have to sell for 20 cents a pound to be equally cheap as a source of energy. Bread, which furnishes 12 hundred-calorie portions per pound, costs about 1 cent per hundred-calorie portion when it sells for 12 cents a pound or for 9 or 10 cents per ordinary baker's loaf. To provide energy as cheaply, ready-to-eat breakfast cereals, which yield about 16 hundred-calorie portions per pound, would have to sell for 16 cents a pound or for 5 cents for an ordinary 5-ounce package.

It is often possible, too, to save money by changing the proportions of the foods from the average groups, and such changes are safe within certain limits. With the exception of the milk for children, the foods of any group may safely be increased or decreased by 50 per cent, and sweets may be omitted altogether, if desired. Under most conditions of living the cheapest foods are the lower-priced cereal preparations, namely, flour, meal, and bread. Flour and meal seldom cost more than one-half cent per hundred-calorie portion, and baker's bread seldom costs more than 1 cent per hundred-calorie portion. One of the most satisfactory ways of reducing the cost of the diet, therefore, is by increasing the amount of cereal foods to 22½ pounds a week for the average family, or until they supply 45 per cent of all the fuel. When this is done, a few precautions must be observed. Care must be taken in the preparation of the cereals so that they will be palatable, and wisdom must be used in the selection of other foods. At least, some of the cereals should be of the kind made from the whole grain, and the extra allowance of cereal foods must never be at the expense of milk or green-leaf vegetables. In general, too, extra care must be taken to select savory or flavorful foods from other groups when for economy's sake a comparatively large part of the diet is made up of cereals.

In figuring the relative costs of foods it must be remembered that a small saving per hundred-calorie portion may amount to considerable in the course of a week. For example, the 800 hundred-calorie portions usually consumed by the average family per week will cost \$16 if the average price paid is 2 cents per hundred-calorie portion. If the average price can be reduced to 1½ cents per hundred-calorie portion the cost of the week's food supply will be \$12 instead of \$16, a saving of \$4.

SUGGESTIONS FOR A HOUSEHOLD FOOD-ACCOUNT BOOK.

If the household food-account book is so arranged that the items of the different groups are kept separate, it is easy to see whether the food supply is well proportioned and also to estimate the amounts of food used. Under each group there should be several subheads. For example, under vegetables and fruits, there should be at least two, one for fresh and canned, the other for dried. This will serve as a reminder that the original or fresh weight of the dried fruits was six times their dried weight, and that therefore 1 pound dried represents 6 pounds fresh weight. Most housekeepers will wish also to record separately fresh, canned, and dried vegetables, and fresh, canned, and dried fruits. In addition to this, it is well to list the green-leaf vegetables separately as a reminder of their importance in the diet. The section of the account book devoted to vegetables and fruits would then be arranged somewhat as shown below, and this would be typical of other groups as well.

HOUSEHOLD FOOD ACCOUNT BOOK.

GROUP I.—Vegetables and fruits.

FRESH GREEN-LEAF VEGETABLES.

Date.	Kind.	Amount.	Weight.	Cost.
.....
.....
.....
.....
Total.....				

OTHER FRESH VEGETABLES.

.....
.....
.....
.....
Total.....				

CANNED VEGETABLES.

.....
.....
.....
.....
Total.....				

GROUP I.—*Vegetables and fruits*—Continued.

DRIED VEGETABLES.

Date.	Kind.	Amount.	Weight.	Cost.
.....				
.....				
.....				
.....				
Total.....				

FRESH FRUITS.

.....				
.....				
.....				
.....				
Total.....				

CANNED FRUITS.

.....				
.....				
.....				
.....				
Total.....				

DRIED FRUITS.

.....				
.....				
.....				
.....				
Total.....				

Under Group II there should be at least two subheads, namely, (1) milk, and (2) eggs, cheese, and flesh foods. For convenience, however, the number of such foods may be increased to make separate records for milk; buttermilk and skim milk; eggs; fresh fish, dried fish, canned fish, meat, poultry, cheese, and peanuts.

Under Group III there should be at least two heads, namely, (1) dry cereals and (2) bread and rolls. This divides the foods that contain only three-fourths of cereal per pound from those that are all cereal. For convenience, a third subhead may be used, namely, (3) other bakery goods. These last-mentioned foods, which include cake, pie, doughnuts, and crackers, usually contain some fat and sugar, which raise their fuel value. They correspond more closely, therefore, in fuel value to the cereals themselves than to bread.

SUMMARY.

The problems of food selection considered in this bulletin come under four heads, namely, adequacy, wholesomeness, attractiveness, and cost. Of all the many food materials now available there is not one that can not be made to contribute in some way to the wholesomeness or to the attractiveness of the diet, but the number of different kinds of foods actually needed is small. All the food materials may in fact be classed under five heads or groups. Some of the members of each of the groups are shown in the illustrations on pages 9 to 16 in such quantities that, taken together, they make a weekly food supply for an average family, consisting of a father, a mother, and three young children. Most of the common food materials that are not shown in the illustrations are included in the lists on pages 9 to 16, or mentioned in other parts of the bulletin. Since no two materials, even those that are grouped together, serve exactly the same purposes in the diet, attention is called to certain exceptionally important foods under each group that must not be omitted for any long period of time.

The grouping recommended brings together under one head those foods which serve some, at least, of the same purposes in the diet, and which can therefore be reasonably compared in price. Accordingly, when economy is concerned it is necessary only to compare the foods of a given group with reference to the amount of nourishment they provide for a given sum of money. The amount of nourishment or of material other than water and inedible substances in a pound of each of the different foods is stated in two ways, by weight and by hundred-calorie portions. By means of either of these two methods of measuring food values the amount of nourishment obtained for a given sum of money in buying different foods at different market prices can be estimated and compared.

Suggestions are made for adapting the allowance of foods to the needs of families that require more or less food than the average family, and also for changing the proportions of the diet in the interest of economy.

NOTE.—Reproductions, in black and white, 18 by 24 inches, of the eight Food Selection and Meal Planning Charts described on page 4 of this bulletin, may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C., at 50 cents a set.

How To Do It

DO YOU want practical suggestions on how to build a silo, a hog house, a poultry house, a potato-storage house, or how to make a fireless cooker, or other farm home convenience? Are you seeking ideas on how to prepare vegetables for the table, how to care for food in the home, how to bake bread and cake and other appetizing foods in an efficient and economical manner? Is there some practical question about your corn or wheat or cotton or other crops, or about your poultry or live stock, to which you are seeking an answer? The answers to thousands of such questions and practical suggestions for doing thousands of things about the farm and home are contained in over 500 Farmers' Bulletins, which can be obtained upon application to the Division of Publications, United States Department of Agriculture, Washington, D. C.