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UNITED STATES DEPARTMENT OF AGRICULTURE  
Agricultural Research Service

DIETS OF LOW-INCOME FAMILIES 1/

Talk by Juanita A. Eagles  
Consumer and Food Economics Research Division  
at the 46th Annual Agricultural Outlook Conference  
Washington, D.C., 9:45 A.M., Wednesday, February 19, 1969

There is widespread interest today in the diets of low-income families. Those of us in educational programs want to know how the level of income affects the kinds and amounts of foods that people choose. We want answers to such questions as: Do the poor use certain foods in larger quantities than families living on higher incomes? How do the poor divide their food dollar? Do the poor get maximum nutritional return for their food dollar? Do the poor have a diet which is adequate nutritionally?

The U.S. Department of Agriculture has conducted research on household food consumption for many years. Some surveys have been nationwide studies while others have been studies on a smaller scale to help with U.S. Department of Agriculture food assistance programs. The data to be reported here are from the most recent of the nationwide surveys and from ten surveys made in six locations of families eligible for assistance programs, whether participating in the programs or not.

Before reporting dietary information, the term "low-income families" will be defined. Then, using the data from the spring 1965 nationwide survey, findings regarding diets of low-income families will be compared with findings of higher income families. Finally, food consumption data for the poor in the six locations will be presented and compared with data for the nationwide low-income families. It is known that all families in the six locations were eligible for food assistance programs, therefore they may be assumed to have been poor. Not all of the nationwide low-income families may be termed "hard core" poor. Some were small families; others may have had a low income the year of the survey but a higher income other years; and some may have been farm families having non-money income.

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1/ Priscilla D. Steele assisted in the preparation of this report.

## I. Definition of Low-Income Families

The most recent nationwide survey for which data are being presented was made in the spring of 1965 of approximately 7,500 housekeeping households. "Low-income families" in this survey were assumed to be the households with 1964 money income, after taxes, under \$3,000. There were 1,717 of these low-income families.

The food assistance program studies were carried out during the period 1961-67. Almost 3,000 "low-income" housekeeping families were included in these surveys. They were eligible for participation in either the Food Donation or Food Stamp Programs. The criteria for eligibility with respect to income differed in the six locations. Also during the period of these surveys--from 1961 to 1967--both prices and incomes increased. Retail food prices as indicated by the Bureau of Labor Statistics index rose 11 percent. <sup>2/</sup> Median incomes of United States families rose from approximately \$5,700 to \$8,000. <sup>3/</sup>

In this report, monetary values are stated in terms of the purchasing power of the dollar in the year of each particular survey, without adjustments for changes in the price level.

## II. Findings of Nationwide Survey, Spring 1965 <sup>4/</sup>

### a. Food consumption

Many factors such as family characteristics, household equipment and facilities, and food preferences, in addition to income, influence the kinds of food used by the family. In general, however, it was found that the low-income families studied used more of the foods in the bread-cereal group but less of other foods than families living on higher incomes (Fig. 1). Foods included in the bread-cereal group are flour, flour mixes, cereals, bread and bakery products. Foods classified in the "meat group" include meat, poultry, fish, eggs, dry beans, dry peas, nuts, and mixtures mostly of meat. The "milk group" includes milk, cream, cheese, ice cream, and other frozen milk desserts. The "vegetable-fruit group" includes all vegetables and fruits and their juices. "Other food" contains the rest--fats, oils, sugars, sweets, and miscellaneous foods.

Differences in consumption of the meat group were not as great among income groups as were differences in consumption of the milk group and vegetable-fruit group. It is possible, however, that the consumption of

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<sup>2/</sup> U.S. Department of Labor, Bureau of Labor Statistics. Consumer Price Index, U.S. Index of Retail Prices--Food at home. (1957-59 = 100).

<sup>3/</sup> U.S. Department of Commerce, Bureau of the Census, Current Population Reports, Consumer Income, Series P-60, Nos. 38 and 55.

<sup>4/</sup> U.S. Department of Agriculture, Agricultural Research Service, Dietary Levels of Households in the United States, Spring 1965--A Preliminary Report. ARS 62-17, 34 pp. January 1968.



particular items within these broad commodity groups may have shown more variation among income levels. When there was more money to spend, there was increased consumption of meat, poultry and fish.

b. Money value of food

On the average, as income increased, more money was spent for food. In addition to the overall increase, the proportion of the total amount that was spent on food away from home increased sharply with income. At the low-income level \$2 out of every \$17, or about 12 percent, was spent on food eaten away from home (Fig. 2). At the \$7-10,000 income level, about 20 percent of the food money went for meals and between-meal snacks eaten away from home.

The division of the food dollar by food groups for families with incomes under \$3,000 and incomes from \$7-10,000 was similar. The food dollar refers to one dollar's worth of food including food purchased, home-produced, or received free. The vegetable-fruit group took 20 cents for both the low-income families and the families at the \$7-10,000 income level. The meat group took 37 cents for the lower income group and 38 cents for the higher income group. The milk group and the bread-cereal group each took 13 cents of the low-income food dollar and 12 cents of the higher income food dollar. Other foods took 17 cents for the lower income group and 18 cents for the higher income group.

c. Quality of diets

The nutritive content of the food used by each reporting household was compared with the National Academy of Sciences-National Research Council, Food and Nutrition Board's Recommended Dietary Allowances (1963). Diets were rated "good" if they furnished the recommended amounts of seven nutrients--protein, calcium, iron, vitamin A value, thiamine, riboflavin, and ascorbic acid. They were rated "poor" if they provided less than two-thirds of the allowance for one or more of the nutrients studied.

In general, the higher the income of the family, the better the diet nutritionally. Income is not the only factor, however, that influences food choices and high income itself does not assure a good diet. In the 1965 survey, some families with incomes of \$10,000 or more failed to meet the recommended levels of all nutrients; in fact, 9 percent of these families had diets that were classified as "poor" (Fig. 3). Similarly, low income does not necessarily mean that a poor diet is consumed. In the 1965 survey, 37 percent of the families in the lowest income group, that is, families with incomes under \$3,000, had diets rated "good."

A greater proportion of families with incomes under \$3,000 had diets below recommended amounts in two or more nutrients, 39 percent in comparison with 21 percent at incomes of \$7-10,000 (Fig. 4). Even at incomes of \$10,000 or more, 18 percent were below recommendations in two or more nutrients.

Diets were most often below recommendations in calcium, vitamin A value, and ascorbic acid. Low-income families used less of the chief food sources

of these nutrients--less milk and milk products and vegetables and fruit--than higher income families.

Low-income families on the average fared less well nutritionally than high-income families, no doubt chiefly because they had less money to spend for food. For they had a greater nutritional return for their food dollar than higher income families (Table 1). This was due to the fact that a number of the less expensive foods they used in proportionally large amounts, such as nonfat dry milk, have a high nutrient content in relation to their cost.

### III. Findings of Ten Food Assistance Program Surveys, 1961-67 5/

The surveys were made in Detroit, Michigan; Fayette County, Pennsylvania; Choctaw County, Oklahoma; Escambia County, Florida; and Sunflower and Washington Counties, Mississippi. A total of ten surveys were conducted in the six locations. Separate surveys were made in both Detroit and Fayette County when the Food Donation and Food Stamp Programs were in operation; in Fayette County, separate surveys were made of urban and rural households.

#### a. Characteristics of households

As indicated above, all households surveyed were eligible for participation in the U.S. Department of Agriculture food assistance program available at the time of the interview. The proportion of eligible households that participated in Food Donation Programs was higher--30 percent in urban Fayette County to 78 percent in Choctaw County--than the proportion that participated in Food Stamp Programs--18 percent in urban Fayette County to 40 percent in Washington County (Table 2). It should be noted that most of the food stamp program surveys were made nearer the time of the introduction of the program than were the food donation program surveys. Some eligible families may have needed help in understanding the requirements for certification under the newly initiated program. Even the existence of the program may have been unknown to some.

The socio-economic characteristics of the groups studied varied considerably. Average income ranged from \$103 per family per month in Washington County to \$152 per family per month in Detroit (Table 3).

Average household size ranged from 3.02 persons in the urban Fayette County study when the food stamp plan was available and in Choctaw County, to 4.63 persons in Sunflower County. The proportion of 1-person families varied considerably, from 9 percent of the rural households surveyed in Fayette County at the time the Donation Program was in operation to 32 percent of households in the Washington County survey. Large families of seven or more persons made up 32 percent of the households in Sunflower County but only 6 and 7 percent of the urban households visited in the two surveys in Fayette County.

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5/ These surveys were made cooperatively by Agricultural Research Service and Economics Research Service.

The head of the family was employed in only 20 to 27 percent of the households in the six studies in Detroit and Fayette County but in approximately 60 percent of the households in Sunflower County, with other locations falling between these values. Many families received some form of welfare assistance, ranging from approximately 25 percent of the urban households in Fayette County to approximately 60 percent of households in Choctaw and Escambia Counties.

In general, the homemaker was a person of little formal schooling who was not employed outside the home. The lowest proportion, 40-50 percent, of homemakers with 8 years or less of education was in Detroit and urban Fayette County and the highest, approximately 75 percent, the Mississippi counties.

b. Food consumption

Generally, the average consumption of bread and cereals for these families was about the same as for the low-income families in the nationwide study.

Urban Fayette County, with the highest per capita income, used less of the foods in the bread-cereal group than any other area; Sunflower County, with the lowest per capita income, used more than any other area (Table 4). The use of foods in the vegetable-fruit group compared favorably with the average consumption of these foods by families in the nationwide study with incomes under \$3,000 except for the three studies with the lowest per capita income--Escambia, Sunflower and Washington Counties.

The average consumption of milk and milk products in six of the studies was less than the average consumption of 3.6 quarts per person per week which was found in the nationwide study of families with incomes under \$3,000. Consumption was lowest in three of the southern locations--Washington, Sunflower and Escambia Counties--and in Detroit.

Average consumption of foods in the meat group generally was below the average consumption found for low-income families in the nationwide study. Families in Detroit used the most of these foods per capita while those in urban Fayette County used the least. Of the foods included in the meat group, consumption of meat, poultry and fish was also lowest for urban Fayette County families and greatest for Detroit, the area with the highest income per household per month (Table 5).

c. Money value of food

The average money value of all food used by the families eligible for the food assistance programs ranged from about \$4 per person per week for the families surveyed when the Food Donation Program was available in Escambia and Sunflower Counties to \$6.19 per person per week for the urban families in Fayette County also surveyed when the Food Donation Program was in effect. The money value of food includes the value of food which was obtained without direct expense--donated, home-produced or received as a gift or pay--in addition to the value of purchased foods.



The average money value of Federally donated foods ranged from \$.24 to \$1 a person a week in those counties in which the donation program was in effect at the time of the survey (Table 6). This wide range among the surveys is attributable to several factors. The list of foods made available by the Federal Government has grown over the years of the surveys. The foods available to families vary from place to place and from time to time. Finally, the participation rate varied among the surveys, accounting for some of the differences in the average money value of donated foods, the averages being based on all families in each of the surveys.

Families in the ten surveys spent relatively little on meals and between-meal food purchased and eaten away from home, 2 to 9 percent of the total value of their purchased food--a considerably smaller proportion than the 12 percent of the low-income families in the nationwide study. Families in Choctaw County and Escambia County had the highest money value of foods purchased and consumed away from home--35 and 26 cents a person a week, respectively.

The division of the food dollar was different for these low-income families than the division for families with incomes under \$3,000 in the nationwide survey. Families eligible for food assistance programs in four of the studies--in Detroit, Escambia County and Washington County--used 44 percent of the food dollar for foods included in the meat group; nationwide families with incomes under \$3,000 used 37 percent (Table 7). In five studies--in urban and rural Fayette County, and in Choctaw County--the value of the milk group exceeded the 13 cents of the dollar that was found for low-income families nationwide. In only one study (Fayette, rural, food stamp) did the value of the vegetable-fruit group approach the 20 cents of the dollar for families with incomes under \$3,000. In the Mississippi and Florida counties, only 13 to 15 percent of the dollar was used for vegetables and fruits.

Families in studies where the Food Distribution Program was in operation spent from 42 percent of their income for food in Choctaw County to 64 percent in urban Fayette County. The proportion of the income laid out for food (cash and coupons) by families in studies where the Food Stamp Program was available ranged from 53 percent in urban Fayette County to 68 percent in Detroit. The percentage of the income spent on food would of course be less, if the dollar value of the donated foods or of the bonus food stamps were added to income. Also the percentage of income spent on food by the food stamp group would be lower if the value of the bonus coupons could be deducted from the outlays for food.

#### d. Quality of diets

In the spot surveys of the so-called "hard-core" poor, diets were compared with the National Academy of Sciences-National Research Council, Food and Nutrition Board's Recommended Dietary Allowances (1958). Diets were rated "good" if they furnished the recommended amounts of the eight nutrients studied and "poor" if they failed to provide two-thirds of the allowance for



one or more of these nutrients. Findings from these studies are not directly comparable to the nationwide study because the 1965 survey used the 1963 revision of the Recommended Dietary Allowances to evaluate diets. Household diets in the low income studies would probably have been rated of slightly higher quality if comparisons had been made with the 1963 revision, largely because of reductions in the recommendations for B-vitamins and calcium for certain sex-age groups.

The proportion of diets rated "good" ranged from about 20 percent--in Escambia County and the two counties in Mississippi--to 41 percent--in Choctaw County. Diets rated "poor" ranged from 36 percent--in rural Fayette County--to about 60 percent--in Escambia County and the two Mississippi counties (Tables 8 and 9).

Diets rated "poor" could be nutritionally inadequate for some individuals over an extended period of time. No conclusions can be drawn on the existence of hunger or malnutrition, however, because no information on the nutritional status of individuals was obtained.

In the three counties with the lowest percentage of good diets and the largest of poor diets--Escambia, Sunflower and Washington--average per capita consumption of foods in the meat, milk, and vegetable-fruit groups were below those found in the nationwide survey for families with incomes under \$3,000. Money value of food per person per week was lower in these studies than in the other seven spot studies. Escambia County had more families, 64 percent, receiving welfare than any other location. Sunflower County had the largest household size. The two Mississippi counties had the highest proportion, over 75 percent, of women with education of 8 years or less; Escambia County had about 60 percent in this educational grouping. The three counties had a higher percentage of homemakers employed outside the home than the other studies.

Few families in these studies had a problem in obtaining enough protein in their diets. The percentages of households with food supplies furnishing the Recommended Dietary Allowance for protein ranged from 69 percent in Escambia County to 88 percent in Detroit (Donation Program survey), rural Fayette County (Donation Program survey) and Choctaw County. The range for those with food supplies furnishing less than two-thirds of the allowance for protein was 2 to 7 percent. Average amounts of protein are shown in Table 10.

A relatively large share of the protein came from animal sources, ranging from 52 percent in Sunflower County to 63 percent in Detroit (Stamp Program survey). The group of meat, poultry, fish was the major source of animal protein (Table 11).

Diets were most often found to be below the recommended levels for calcium, vitamin A value and ascorbic acid, as were the diets of households in the nationwide survey with incomes under \$3,000.

Only in rural Fayette County and in Choctaw County did the per capita amount of calcium reach the level of the low-income families in the nationwide study. In Sunflower County where there was a relatively low use of foods in the milk group there was, however, a relatively high per capita level of calcium. This was due to the extensive use of foods in the bread-cereal group. The kinds and quantities of grain products used by families in the Southeastern United States contributed a significant amount of calcium to the diet.

In eight of the ten studies, all except the two studies in Mississippi, families had more vitamin A in their diets than families in the nationwide study with incomes under \$3,000; in four of the studies--Detroit (Food Donation and Food Stamp), Escambia County and Choctaw County--they exceeded the amount of vitamin A value for families with \$7-10,000 in the nationwide survey.

In only one study, in rural Fayette County, did average quantities of ascorbic acid approach the level of low-income families nationally. Fewer households had food supplies that furnished the Recommended Dietary Allowances for ascorbic acid than for any other nutrient--ranging from 31 percent in Sunflower County to 60 percent in rural Fayette County (Stamp Program survey). The range for those with food supplies furnishing less than two-thirds the Recommended Dietary Allowances was 19 to 50 percent.

Families in the ten surveys had even greater return in calories and in most of the nutrients for their food dollar, on the average, than families with incomes under \$3,000 in the nationwide survey (Tables 1 and 12). They made good use of low-cost foods as a source of nutrients although they had little money to spend. For example, in three southern counties--Escambia, Sunflower and Washington--where a dollar's worth of food provided the highest amounts of calcium, the percentage furnished by grain products was high, ranging from 21 to 32 percent (Table 13). In Escambia and Choctaw Counties, dark green and deep yellow vegetables, generally inexpensive sources of vitamin A, contributed 60 percent of the total vitamin A value, a much higher percentage than in the other counties and nationwide (Table 14). In the four southern counties, the dark green and deep yellow vegetables were important contributors of ascorbic acid (Table 15).

#### Summary and Implications for Consumer Education Programs

In this paper, we have compared the diets of low-income families with higher income families as found in our nationwide survey. We found that these low-income families:

1. Used more of the foods in the bread-cereal group and less of other foods than higher income families.
2. Spent less money for food than higher income families but divided their food dollar amongst the food groups in about the same way as the higher income families.

3. Did not have diets of as high nutritional quality as the families with higher income. Low income of itself, however, did not necessarily mean that a poor diet was consumed. Diets were most often below recommendations in calcium, vitamin A value and ascorbic acid. They had a greater return for their food dollar than higher income families due to their use of less expensive foods in proportionally large amounts.

Some of the same findings emerged from a review of ten studies made in six locations of families eligible for the U.S. Department of Agriculture's food assistance programs. We found that these so-called "hard-core poor" families:

1. Used about the same amount of foods in the bread-cereal group and less of foods in the milk, meat, and vegetable-fruit groups than low-income families in the nationwide survey.
2. Spent less money for food than low-income families in the nationwide survey. They spent relatively little on meals and snacks purchased and eaten away from home. The division of the food dollar was different for these low-income families than the division for low-income families in the nationwide survey; nearly all spent more for the bread-cereal group and all spent less for the vegetable-fruit group. They spent a large percentage of their income for food.
3. Probably had diets of lower nutritional quality than low-income families in the nationwide survey. Precise comparisons cannot be made, however, because different standards were used for evaluation of the diets in the nationwide survey and in the ten smaller surveys.

Some families eligible for food assistance program had good diets. Those with poor diets were most often below recommendations in calcium, vitamin A value and ascorbic acid. It was not necessarily the group of families with the highest per capita income that had the highest intake of nutrients. In general, families eligible for the food assistance programs had a greater return for the money value of their food than low-income families in the nationwide survey.

Together, the findings of the nationwide survey and of the ten surveys would seem to indicate that consumer education programs conducted with low-income families should:

1. Help families become aware of and make use of available food assistance programs. Home gardens where practical might also be encouraged.
2. Help low-income families make the best use of the less expensive foods of high nutritive value. Help them see the importance of variation in



their diets, such as indicated in "Food for Thrifty Families Series." 6/  
Encourage them to substitute some of the less expensive foods (in the  
four groups shown there) for more expensive foods.

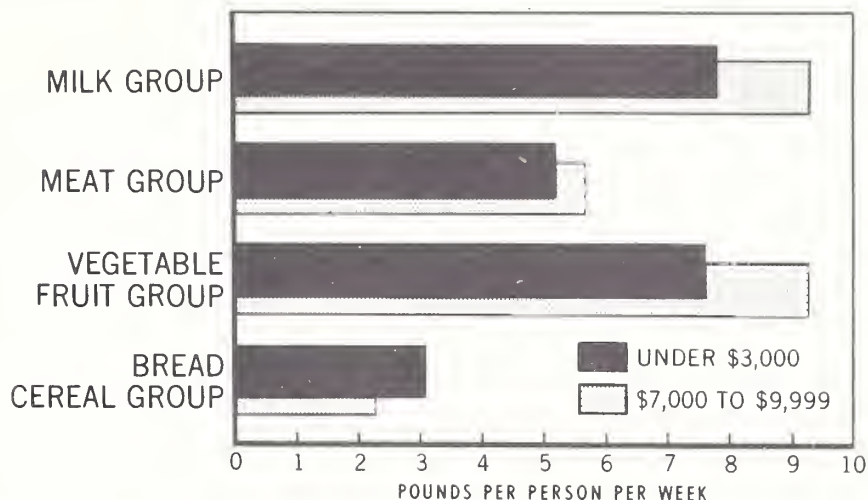
3. Emphasize increased consumption of milk and milk products, fruits, and  
vegetables to help increase the nutrient quality of the diets especially  
with regard to calcium, vitamin A value and ascorbic acid.

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6/ U.S. Department of Agriculture Federal Extension Service, with Agricultural  
Research Service and Consumer and Marketing Service cooperating. Food for  
Thrifty Families Series, Packets B and B-1. 1967.

## INCOME AND FOOD USE

At low incomes, more bread and cereals, less of other foods

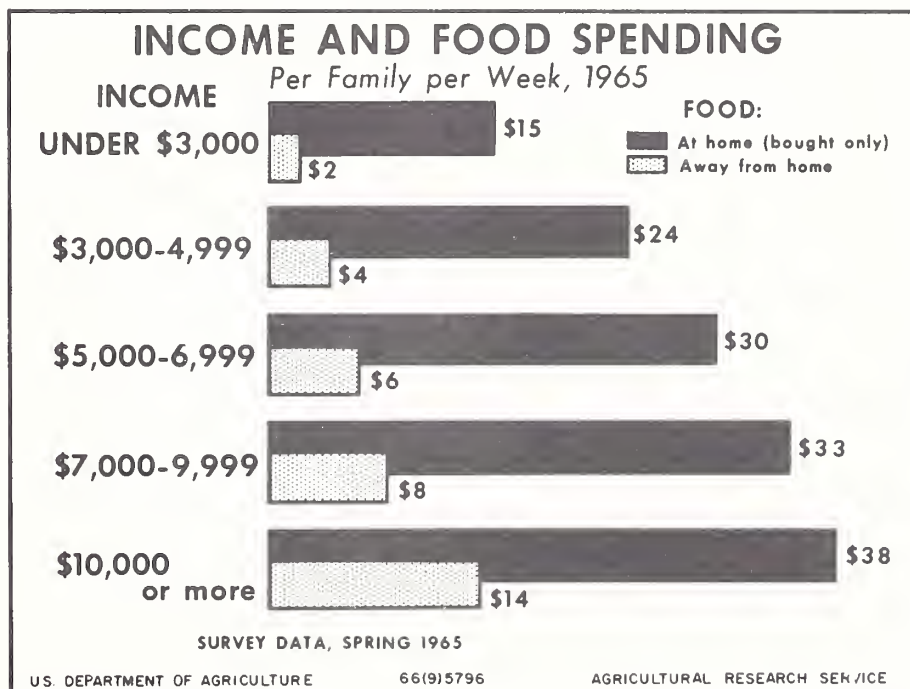


Household Food Consumption Surveys, Spring 1965 and 1955  
U.S. DEPARTMENT OF AGRICULTURE

NEG. NO. 67(6) 5835

All Households in U.S.  
AGRICULTURAL RESEARCH SERVICE

Figure 1



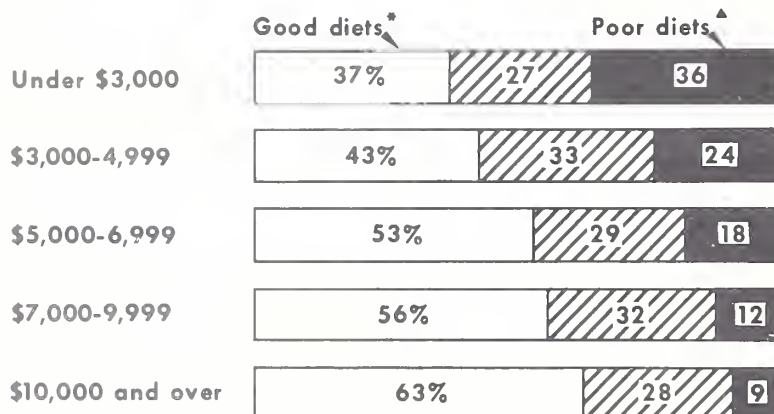
U.S. DEPARTMENT OF AGRICULTURE

66(9)5796

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Figure 2

## INCOME AND QUALITY OF DIETS



\* MET RECOMMENDED DIETARY ALLOWANCES FOR 7 NUTRIENTS.

^ HAD LESS THAN 2/3 ALLOWANCE FOR 1 TO 7 NUTRIENTS.

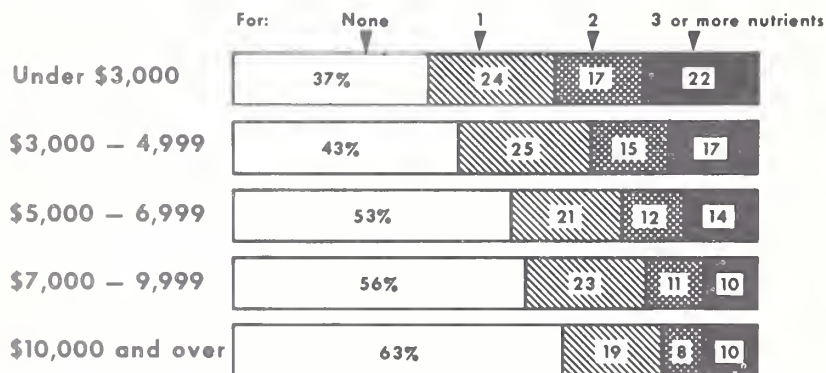
NATIONWIDE HOUSEHOLD FOOD CONSUMPTION SURVEY, SPRING 1965

U.S. DEPARTMENT OF AGRICULTURE

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Figure 3

## INCOME AND DIETS BELOW ALLOWANCES



RECOMMENDED DIETARY ALLOWANCES

NATIONWIDE HOUSEHOLD FOOD CONSUMPTION SURVEY, SPRING 1965

U.S. DEPARTMENT OF AGRICULTURE

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Figure 4



Table 1.--Nutrients furnished by a dollar's worth of food, households in the United States, by income, spring 1965

Income  (1)	A dollar's worth of food provided--				
	Food energy  (2)	Protein  (3)	Calcium  (4)	Vitamin A value  (5)	Ascorbic acid  (6)
	<u>Cal.</u>	<u>G.</u>	<u>Mg.</u>	<u>I.U.</u>	<u>Mg.</u>
Under \$3,000-----	3,150	99	1,090	6,860	85
\$3,000 to \$4,999-----	2,860	92	970	6,320	80
\$5,000 to \$6,999-----	2,570	85	890	5,990	81
\$7,000 to \$9,999-----	2,380	79	830	5,320	80
\$10,000 and over-----	2,100	72	750	5,180	82

Source: Dietary levels of households in the United States, spring 1965.  
ARS 62-17. January 1968.

Table 2.--Selected characteristics of families eligible for USDA Food Programs, 10 surveys, 1961-67

Location and year of survey and Food Program available with percent participation (1)	Total household (2)	Urban (3)	Household size <u>1/</u>			Receiving welfare <u>2/</u>	Head employed <u>2/</u>	Homemakers--		
			Average persons	1 person	7 or more persons			Not employed away from home	8 or less years of schooling	60 years of age and over
	No.	Pct.	No.	Pct.	Pct.	(7)	(8)	(9)	(10)	(11)
Detroit, Mich., 1961:										
Donation (56)-----	454	100	4.19	15	19	41	23	81	46	19
Stamp (27)-----	361	100	4.16	16	19	42	27	81	42	18
Fayette Co., Pa., 1961:										
Urban:										
Donation (30)-----	226	100	3.11	19	6	24	22	87	44	35
Stamp (18)-----	177	100	3.02	23	7	24	22	87	46	38
Rural:										
Donation (58)-----	264	0	4.06	9	14	36	27	91	55	19
Stamp (35)-----	264	0	3.88	14	13	40	20	88	60	26
Choctaw Co., Okla., 1962,										
Donation (78)-----	510	29	3.02	26	10	56	34	82	65	40
Escambia Co., Fla., 1963,										
Donation (59)-----	224	N/A	3.80	17	17	64	45	54	61	26
Sunflower Co., Miss., 1967,										
Donation (77)-----	189	34	4.63	16	32	30	59	73	76	27
Washington Co., Miss., 1967,										
Stamp (40)-----	295	62	3.69	33	20	39	47	66	78	35

1/ A person equals 21 meals from home food supplies.

2/ Household head employed whether male or female.

Table 3.--Income and money value of food, families eligible for USDA Food Programs, 10 surveys, 1961-67

Location and year of survey and Food Program available with percent participation  (1)	Income per month		Income spent for food 3/ (4)	Money value of food per person per week				
	Per family 1/ (2)	Per person 2/ (3)		Total (5)	Purchased food--			Without direct expense 4/ (9)
					Total (6)	At home (7)	Away from home (8)	
	<u>Dol.</u>	<u>Dol.</u>	<u>Pct.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>
Detroit, Mich., 1961:								
Donation (56)-----	148	36	58	5.40	4.86	4.73	0.13	0.54
Stamp (27)-----	152	37	68	6.00	5.81	5.63	.18	.19
Fayette Co., Pa., 1961:								
Urban:								
Donation (30)-----	121	39	64	6.19	5.77	5.62	.15	.41
Stamp (18)-----	131	44	53	5.70	5.39	5.26	.13	.31
Rural:								
Donation (58)-----	140	35	61	6.00	4.93	4.77	.16	1.08
Stamp (35)-----	137	36	62	5.72	5.19	5.09	.10	.57
Choctaw Co., Okla., 1962,								
Donation (78)-----	125	40	42	5.95	3.85	3.50	.35	2.09
Escambia Co., Fla., 1963,								
Donation (59)-----	137	35	45	3.99	3.60	3.34	.26	.39
Sunflower Co., Miss., 1967,								
Donation (77)-----	115	24	47	4.02	2.62	2.49	.13	1.40
Washington Co., Miss., 1967,								
Stamp (40)-----	103	26	62	4.08	3.71	3.59	.12	.37

1/ Average income per family of month preceding survey.

2/ Income per family per month divided by average family size (count of members).

3/ Percent of month's income spent for purchased food.

4/ Includes foods donated, home produced, and received as gift or pay.



Table 4.--Quantity of food used per person per week by food group, families eligible for USDA Food Programs, 10 surveys, 1961-67

Location and year of survey and Food Program available with percent participation (1)	Milk <u>1</u> / (calcium equiv.) (2)	Meat <u>2</u> / (3)	Vege- tables, fruit <u>3</u> / (4)	Bread, cereal <u>1</u> / (flour equiv.) (5)	Other food <u>5</u> / (6)
	<u>Lbs.</u>	<u>Lbs.</u>	<u>Lbs.</u>	<u>Lbs.</u>	<u>Lbs.</u>
Detroit, Mich., 1961:					
Donation (56)-----	7.00	5.64	6.17	3.14	2.48
Stamp (27)-----	6.44	6.08	8.75	3.10	2.56
Fayette Co., Pa., 1961:					
Urban:					
Donation (30)-----	8.66	4.17	7.36	2.72	2.62
Stamp (18)-----	8.23	3.69	8.30	2.62	2.35
Rural:					
Donation (58)-----	9.43	4.79	8.41	4.00	3.21
Stamp (35)-----	7.61	4.15	10.21	3.39	3.14
Choctaw Co., Okla., 1962,					
Donation (78)-----	11.36	4.78	7.89	4.17	2.77
Escambia Co., Fla., 1963,					
Donation (59)-----	5.43	4.52	4.58	3.16	1.76
Sunflower Co., Miss., 1967,					
Donation (77)-----	6.84	3.91	3.57	4.26	2.50
Washington Co., Miss., 1967,					
Stamp (40)-----	4.22	4.49	3.52	3.46	1.85

1/ Includes milk, cream, cheese, and ice cream and other frozen milk deserts.

2/ Meat group includes, meat, poultry, fish, eggs, dry beans, dry peas, nuts, and mixtures mostly meat.

3/ Vegetables and fruit group includes all vegetables and fruits and their juices.

4/ Bread and cereal group includes flour, flour mixes, cereal, pastes, bread and bakery products.

5/ Other food includes fats and oils, sugar and sweets, and miscellaneous foods.

Table 5.--Meat group: Quantity used per person, per week, families eligible for USDA Food Programs, 10 surveys, 1961-67

Location and year of survey and Food Program available with percent participation (1)	Total (2)	Meat, poultry, fish (3)	Bacon, salt pork (4)	Eggs (5)	Dry legumes (6)	Nuts (7)	Mix- tures, soups, mostly meat (8)
	<u>Lbs.</u>	<u>Lbs.</u>	<u>Lbs.</u>	<u>Lbs.</u>	<u>Lbs.</u>	<u>Lbs.</u>	<u>Lbs.</u>
Detroit, Mich., 1961:							
Donation (56)-----	5.64	3.91	0.43	0.78	0.31	0.14	0.07
Stamp (27)-----	6.08	4.51	.41	.64	.31	.11	.11
Fayette Co., Pa., 1961:							
Urban:							
Donation (30)-----	4.17	2.83	.19	.70	.23	.08	.14
Stamp (18)-----	3.69	2.59	.18	.61	.15	.05	.11
Rural:							
Donation (58)-----	4.79	2.97	.21	.96	.44	.08	.12
Stamp (35)-----	4.15	2.83	.22	.62	.31	.09	.09
Choctaw Co., Okla., 1962,							
Donation (78)-----	4.78	2.76	.51	.77	.50	.14	.10
Escambia Co., Fla., 1963,							
Donation (59)-----	4.52	3.06	.34	.49	.40	.14	.08
Sunflower Co., Miss., 1967,							
Donation (77)-----	3.91	2.69	.30	.33	.45	.13	.01
Washington Co., Miss., 1967,							
Stamp (40)-----	4.49	3.12	.36	.43	.52	.03	.04

Table 6.--Money value of food obtained without direct expense, families eligible for USDA Food Programs, 10 surveys, 1961-67

Location and year of survey and Food Program available with percent participation (1)	Money value per person in a week for--			
	Total	Home produced	Gift or pay	Federally donated
	(2)	(3)	(4)	(5)
	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>
Detroit, Mich., 1961:				
Donation (56)-----	0.54	0.02	0.07	0.44
Stamp (27)-----	.19	.06	.14	--
Fayette Co., Pa., 1961:				
Urban:				
Donation (30)-----	.41	.05	.12	.24
Stamp (18)-----	.31	.13	.18	--
Rural:				
Donation (58)-----	1.08	.32	.09	.67
Stamp (35)-----	.57	.38	.19	--
Choctaw Co., Okla., 1962,				
Donation (78)-----	2.09	.93	.16	1.00
Escambia Co., Fla., 1963,				
Donation (59)-----	.39	.05	.07	.28
Sunflower Co., Miss., 1967,				
Donation (77)-----	1.40	.39	.06	.95
Washington Co., Miss., 1967,				
Stamp (40)-----	.37	.19	.09	.09



Table 7.--Division of food dollar, families eligible for USDA Food Programs, 10 surveys, 1961-67

Location and year of survey and Food Program available with percent participation (1)	All food (2)	Milk <u>1/</u> (3)	Meat <u>2/</u> (4)	Veg- tables, fruit <u>3/</u> (5)	Bread, cereal <u>4/</u> (6)	Other food <u>5/</u> (7)
	<u>Pct.</u>	<u>Pct.</u>	<u>Pct.</u>	<u>Pct.</u>	<u>Pct.</u>	<u>Pct.</u>
Detroit, Mich., 1961:						
Donation (56)-----	100	11.6	43.5	16.1	13.4	15.3
Stamp (27)-----	100	12.2	44.2	16.6	13.2	13.8
Fayette Co., Pa., 1961:						
Urban:						
Donation (30)-----	100	16.2	35.8	17.5	13.4	17.2
Stamp (18)-----	100	17.5	35.5	17.4	15.0	14.6
Rural:						
Donation (58)-----	100	13.9	36.1	17.3	14.8	17.8
Stamp (35)-----	100	15.2	33.4	18.5	16.3	16.5
Choctaw Co., Okla., 1962,						
Donation (78)-----	100	17.3	36.0	16.5	13.2	17.1
Escambia Co., Fla., 1963,						
Donation (59)-----	100	10.3	44.2	14.8	15.2	15.5
Sunflower Co., Miss., 1967,						
Donation (77)-----	100	10.5	40.0	13.4	17.2	18.8
Washington Co., Miss., 1967,						
Stamp (40)-----	100	10.3	44.0	13.8	15.6	16.4

1/ Includes milk, cream, cheese, and ice cream and other frozen milk desserts.

2/ Meat group includes meat, poultry, fish, eggs, dry beans, dry peas, nuts, and mixtures, mostly meat.

3/ Vegetables and fruit group includes all vegetables and fruits and their juices.

4/ Bread and cereal group includes flour, flour mixes, cereal, pastes, bread and bakery products.

5/ Other food includes fats and oils, sugar and sweets, and miscellaneous foods.

Table 8.--Household diets meeting Recommended Dietary Allowances (1958), for all 8 nutrients and each nutrient separately, families eligible for USDA Food Programs, 10 surveys, 1961-67

Location and year of survey and Food Program available with percent participation (1)	Meeting RDA for all 8 nutrients (2)	Household diets meeting RDA for--							
		Protein	Calcium	Iron	Vitamin A value	Thiamine	Riboflavin	Niacin	Ascorbic acid
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
Detroit, Mich., 1961:									
Donation (56)-----	28	88	44	83	75	75	73	90	50
Stamp (27)-----	35	85	43	84	76	72	70	88	57
Fayette Co., Pa., 1961:									
Urban:									
Donation (30)-----	25	84	56	73	62	62	71	78	42
Stamp (18)-----	28	75	46	67	69	58	59	73	56
Rural:									
Donation (58)-----	28	88	55	91	68	84	79	90	45
Stamp (35)-----	31	81	46	80	70	71	67	83	60
Choctaw Co., Okla., 1962,									
Donation (78)-----	41	88	69	89	76	85	82	88	47
Escambia Co., Fla., 1963,									
Donation (59)-----	20	69	37	76	73	63	55	83	37
Sunflower Co., Miss., 1967,									
Donation (77)-----	20	78	50	88	47	75	61	84	31
Washington Co., Miss., 1967,									
Stamp (40)-----	17	79	40	79	57	64	47	80	36

Table 9.--Household diets providing less than two-thirds Recommended Dietary Allowances (1958), in any one of 8 nutrients and of each nutrient separately, families eligible for USDA Food Programs, 10 surveys, 1961-67

Location and year of survey and Food Program available with percent participation (1)	Providing less than 2/3's RDA in any one nutrient (2)	Households providing less than two-thirds RDA in--							
		Protein	Calcium	Iron	Vitamin A value	Thiamine	Riboflavin	Niacin	Ascorbic acid
		(3)	(4)	(5)	(6)	(7)	(8)	(8)	(9)
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
Detroit, Mich., 1961:									
Donation (56)-----	39	2	23	4	16	6	9	2	26
Stamp (27)-----	42	5	28	5	15	9	12	4	28
Payette Co., Pa., 1961:									
Urban:									
Donation (30)-----	46	5	17	8	22	10	11	7	35
Stamp (18)-----	41	4	22	10	18	11	13	9	24
Rural:									
Donation (58)-----	43	3	16	2	16	3	5	2	28
Stamp (35)-----	36	4	23	5	17	7	9	4	19
Choctaw Co., Okla., 1962,									
Donation (78)-----	37	3	11	2	13	3	6	3	32
Escambia Co., Fla., 1963,									
Donation (59)-----	57	7	36	8	17	11	18	5	44
Sunflower Co., Miss., 1967,									
Donation (77)-----	61	3	29	3	33	7	17	4	50
Washington Co., Miss., 1967,									
Stamp (40)-----	59	5	36	6	30	12	27	7	45

Table 10.--Nutritive value of diets per person per day, families eligible for USDA Food Programs, 10 surveys, 1961-67

Location and year of survey and Food Program available with percent participation (1)	Food energy (2)	Protein (3)	Calcium (4)	Iron (5)	Vitamin A value (6)	Thiamine (7)	Riboflavin (8)	Niacin (9)	Ascorbic acid (10)
	<u>Cal.</u>	<u>G.</u>	<u>Mg.</u>	<u>Mg.</u>	<u>I.U.</u>	<u>Mg.</u>	<u>Mg.</u>	<u>Mg.</u>	<u>Mg.</u>
Detroit, Mich., 1961:									
Donation (56)-----	2,900	95	890	17	8,300	1.56	2.04	20	71
Stamp (27)-----	3,080	100	870	18	9,500	1.65	2.05	21	78
Fayette Co., Pa., 1961:									
Urban:									
Donation (30)-----	2,810	90	970	15	7,200	1.46	2.02	17	67
Stamp (18)-----	2,630	84	920	14	6,900	1.36	1.90	16	78
Rural:									
Donation (58)-----	3,460	107	1,080	20	7,100	1.99	2.46	21	75
Stamp (35)-----	3,150	94	910	17	6,900	1.66	2.06	19	90
Choctaw Co., Okla., 1962,									
Donation (78)-----	3,550	105	1,295	20	10,300	1.93	2.59	20	76
Escambia Co., Fla., 1963,									
Donation (59)-----	2,460	78	805	14	8,900	1.29	1.67	17	54
Sunflower Co., Miss., 1967,									
Donation (77)-----	2,830	82	975	18	4,300	1.48	1.82	18	46
Washington Co., Miss., 1967,									
Stamp (40)-----	2,490	75	785	16	4,900	1.32	1.45	16	49



Table 11.--Contribution of food groups to protein, families eligible for USDA Food Programs, 10 surveys, 1961-67

Food group (1)	Detroit		Fayette County				Choctaw County	Escambia County	Sunflower County	Washington County
	Donation	Stamp	Urban		Rural		Donation	Donation	Donation	Stamp
			(4)	(5)	(6)	(7)				
	(2)	(3)					(8)	(9)	(10)	(11)
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
All food groups 1/-	100	100	100	100	100	100	100	100	100	100
Milk, cream, ice cream, cheese-----	17	15	23	24	21	20	24	16	18	12
Meat, poultry, fish-----	39	43	33	33	29	31	26	36	31	38
Eggs-----	6	5	6	5	6	5	5	5	3	4
Other protein foods-----	7	7	6	4	7	6	10	11	11	11
Dark-green and deep-yellow vegetables, sweetpotatoes-----	1	1	*	*	*	*	2	2	1	1
Other vegetables-----	4	4	5	5	5	6	4	3	2	2
Citrus fruit and tomatoes-----	1	1	1	2	1	2	*	*	*	1
Other fruits-----	*	*	*	1	1	1	*	*	1	*
Grain products-----	24	23	24	26	28	28	27	27	34	30
Fats and oils-----	*	*	*	*	*	*	*	*	*	*
Sugar, sweets-----	*	*	1	*	*	*	*	*	*	*
Miscellaneous-----	*	*	*	*	*	*	*	*	0	*

1/ Percents may not add to 100 because of rounding.

\*0.5 or less.

Table 12.--Nutrients furnished by a dollar's worth of food, families eligible for USDA Food Programs, 10 surveys, 1961-67

Location and year of survey and Food Program available with percent participation  (1)	A dollar's worth of food provided--				
	Food energy	Protein	Calcium	Vitamin A value	Ascorbic acid
	(2)	(3)	(4)	(5)	(6)
	<u>Cal.</u>	<u>G.</u>	<u>Mg.</u>	<u>I.U.</u>	<u>Mg.</u>
Detroit, Mich., 1961:					
Donation (56)-----	3,870	127	1,200	11,100	95
Stamp (27)-----	3,710	120	1,050	11,400	94
Fayette Co., Pa., 1961:					
Urban:					
Donation (30)-----	3,270	105	1,100	8,400	78
Stamp (18)-----	3,290	105	1,150	8,600	98
Rural:					
Donation (58)-----	4,170	129	1,300	8,600	90
Stamp (35)-----	3,940	118	1,150	8,600	112
Choctaw Co., Okla., 1962,					
Donation (78)-----	4,440	131	1,600	12,900	95
Escambia Co., Fla., 1963,					
Donation (59)-----	4,640	147	1,500	16,800	102
Sunflower Co., Miss., 1967,					
Donation (77)-----	5,050	146	1,750	7,700	82
Washington Co., Miss., 1967,					
Stamp (40)-----	4,370	132	1,400	8,600	86

Table 13.---Contribution of food groups to calcium, families eligible for USDA Food Programs, 10 surveys, 1961-67

Food group	Detroit		Tayette County				Choctaw County		Escambia County		Sunflower County		Washington County	
	Donation	Stamp	Urban		Rural		Donation	Stamp	Donation	Stamp	Donation	Stamp	Donation	Stamp
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
All food groups 1/-----	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Milk, cream, ice cream	60	56	68	68	67	64	67	52	54	41				
cheese-----	4	5	2	2	2	3	2	3	3	3				
Meat, poultry, fish-----	3	2	2	2	3	2	2	2	1	2				
Eggs-----	4	4	2	2	4	3	5	5	5	6				
Other protein foods-----														
Dark-green and deep yellow	7	7	2	1	2	1	6	11	6	8				
vegetables, sweetpotatoes	5	6	5	4	5	5	4	4	2	3				
Other vegetables-----	1	1	1	2	1	2	*	1	*	1				
Citrus fruit and tomatoes-	1	1	1	1	1	1	1	*	1	1				
Other fruits-----	14	16	14	15	14	17	12	21	22	32				
Grain products-----	1	1	1	1	1	1	*	1	*	*				
Fats and oils-----	1	1	1	1	1	1	2	1	5	3				
Sugar, sweets-----	1	1	1	1	1	1	*	1	0	0				
Miscellaneous-----	*	*	*	*	*	*	*	*	*	*				

1/ Percents may not add to 100 because of rounding

\*0.5 or less.

Table 14.--Contribution of food groups to vitamin A value, families eligible for USDA Food Programs,  
10 surveys, 1961-67

Food group	Detroit		Fayette County				Choctaw County	Escambia County	Sunflower County	Washington County
	Stamp		Urban		Rural		Donation	Donation	Donation	Stamp
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
All food groups <u>1</u> /-----	100	100	100	100	100	100	100	100	100	100
Milk, cream, ice cream, cheese-----	7	8	15	15	13	14	8	4	8	8
Meat, poultry, fish-----	26	25	20	17	13	12	8	18	6	9
Eggs-----	6	4	6	6	9	6	5	4	5	6
Other protein foods-----	*	*	1	*	1	1	*	*	*	*
Dark-green and deep-yellow vegetables, sweetpotatoes-----	41	38	26	20	25	17	60	60	49	54
Other vegetables-----	3	4	4	4	5	5	4	2	2	3
Citrus fruit and tomatoes-----	4	7	10	18	12	23	3	3	6	6
Other fruits-----	2	5	3	5	3	6	2	1	3	3
Grain products-----	1	*	1	1	1	1	2	1	6	1
Fats and oils-----	9	8	15	13	18	15	8	6	14	11
Sugar, sweets-----	*	*	*	*	*	*	*	0	1	*
Miscellaneous-----	--	*	*	*	--	--	0	0	0	*

1/ Percents may not add to 100 because of rounding

\*0.5 or less.

Dashes denote lack of reliable data.



Table 15.--Contribution of food groups to ascorbic acid, families eligible for USDA Food Programs, 10 surveys, 1961-67

Food group (1)	Detroit		Fayette County				Choctaw County		Escambia County		Sunflower County		Washington County	
	Donation	Stamp	Urban		Rural		Donation	Stamp	Donation	Stamp	Donation	Stamp	Donation	Stamp
	(2)	(3)	(4)	(5)	(6)	(7)								
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
All food groups 1/-----	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Milk, cream, ice cream, cheese-----	6	5	9	8	8	5	9	5	5	7	5	7	5	5
Meat, poultry, fish-----	2	2	1	1	1	1	1	1	2	*	*	*	1	1
Eggs-----	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other protein foods-----	1	1	1	*	1	1	1	1	1	1	1	1	1	1
Dark-green and deep-yellow vegetables, sweetpotatoes-----	25	23	9	14	8	11	31	11	45	35	35	35	33	33
Other vegetables-----	29	30	37	29	37	30	34	30	23	22	22	22	21	21
Citrus fruit and tomatoes-----	32	30	36	40	36	43	18	43	20	22	22	22	31	31
Other fruits-----	5	9	7	8	6	7	5	7	3	10	10	10	7	7
Grain products-----	*	*	*	*	*	*	0	*	*	0	0	0	0	0
Fats and oils-----	--	--	--	--	--	--	0	--	0	0	0	0	0	0
Sugar, sweets-----	1	1	1	1	2	2	1	2	*	3	3	3	2	2
Miscellaneous-----	--	--	--	*	--	--	0	--	0	0	0	0	0	0

1/ Percents may not add to 100 because of rounding.

\*0.5 or less.

Dashes denote lack of reliable data.