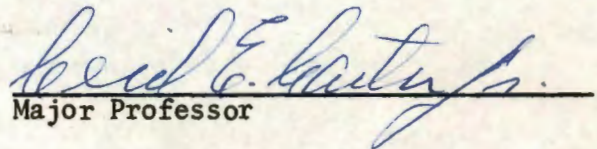


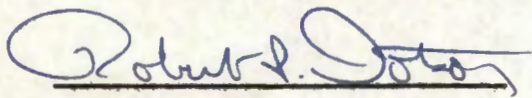
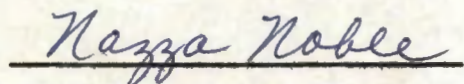
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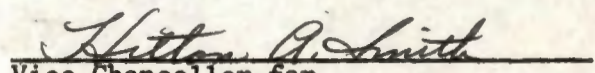
I am submitting herewith a thesis written by Mary Louise Horton entitled "Increase in Knowledge of Homemakers Participating in Extension's Expanded Food and Nutrition Program in Selected Tennessee Counties, 1973." I recommend that it be accepted for nine quarter hours of credit in partial fulfillment of the requirements for the degree of Master of Science, with a major in Agricultural Extension Education.


Major Professor

We have read this thesis and
recommend its acceptance:

Accepted for the Council:


Vice Chancellor for
Graduate Studies and Research

147

INCREASE IN KNOWLEDGE OF HOMEMAKERS PARTICIPATING IN EXTENSION'S
EXPANDED FOOD AND NUTRITION PROGRAM IN SELECTED
TENNESSEE COUNTIES, 1973

A Thesis
Presented to
the Graduate Council of
The University of Tennessee

In Partial Fulfillment
of the Requirements for the Degree
Master of Science

by
Mary Louise Horton
August 1973

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ABSTRACT

The purpose of this study was to determine the relationship between Tennessee expanded food and nutrition program and homemakers' knowledge of foods and their personal and family characteristics. The study also was designed to determine improvement in the homemakers' knowledge of the four food groups from initial to latest food recall.

The population of this study included Tennessee homemakers enrolled in the Expanded Food and Nutrition Extension Program from the ten original program counties who had participated for at least six months as of October 1971, when the data were collected. The ten original Expanded Food and Nutrition Education Program counties in Tennessee were Roane, Hawkins, Putman, Dekalb, Warren, Coffee, Robertson, Davidson, Shelby, and Gibson. The counties were fairly evenly distributed across the state and, at the time of the study, represented approximately 73 percent of the total number of participant families in Tennessee.

The sample included 397 participant families, which represented a 5 percent sample from each of the ten original counties.

The data were collected and recorded from three family record forms available from the county Extension office of the ten original program counties. Computations were made by The University of Tennessee Computing Center.

A contingency table analysis program was used to determine the relationship between knowledge of food needed for good health and each of the 24 independent variables. The program computed two-way tables

consisting of column, row, and entire table percentages and frequencies. The statistical output of this program included chi square with degrees of freedom.

Major findings of this study were:

1. Increases in knowledge of food in the milk, meat, bread/cereals groups from first to latest recall were greater among those of rural residence than among those of farm residence. For the fruit-vegetable food group increase in knowledge was greater among farm residents.

2. Increases in knowledge of food in the meat, fruit/vegetables and bread/cereals groups were greater among white; while the black had the largest increase in knowledge of the value of the milk food group.

3. Increase in knowledge of food in the milk group from first to latest recall was greater among those in the 35-64 years of age group; while the under 35 years age group had a slightly greater increase in knowledge of food in the meat group. The 65 years and over age group had increases in knowledge of food in both bread/cereals and fruit/vegetables groups.

4. Increases in knowledge of milk, meat, bread/cereals, and fruit/vegetables groups from first to latest recall were greater among those with less than eight years formal education than among those with eight and over years of formal education.

5. Increases in knowledge of food in meat, bread/cereals, and fruit/vegetable groups from first to latest recall were greater among those with two or more years on the program than among those with less than two years on the program. The milk group increase in knowledge was greater among those with less than two years on the program.

6. Increases in knowledge of food in milk and meat groups from first to latest recall were greater among those in the \$1000-2999 income group than among those below. On the other hand, the fruit/vegetable and bread/cereals group increases in knowledge were greater among those in the under \$1000 group.

7. Increases in knowledge of food in milk, meat, and fruit/vegetables groups from first to latest recall were greater among homemakers who also made the most improvement in the adequacy of their diet food intake.

8. Increases in knowledge of food in milk and meat groups were greater among those who had had more than one program assistant than among those with only one program assistant. The fruit/vegetables and bread/cereals group increases in food knowledge were greater among those who had not had more than one program assistant.

Implications and recommendations also were included.

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CHAPTER I

THE PROBLEM AND ITS SETTING

I. INTRODUCTION

Extension-type programs historically have been concerned with knowledge families have of food to keep healthy even before the Cooperative Extension Service was officially established by the Smith-Lever Act of 1914.

Family living programs were developed to teach homemakers to improve the health of their families by planning, producing, preparing, and preserving foods for a nutritious diet on a year-round basis (18:9).*

Improvement of knowledge of diets has been and remains to be a primary objective of Extension nutrition education. Even though there have been some major accomplishments, it has become obvious over the past decade that many of the neediest families were not being reached.

The American people were shocked by the finding of the Citizens' Board of Inquiry into Hunger and Malnutrition in 1968 (3:). Many could not believe that such widespread deprivation and hunger could exist in this, the wealthiest nation of the world.

It then had become obvious that new methods had to be sought to improve nutrition among low-income families. There was a recognized need

*Numbers in parentheses refer to similarly numbered items in the Bibliography; those after the colon are page numbers.

for nutrition education programs for those at all income levels. However, lack of knowledge has worked special hardships for the poor because their family food budgets offer so little leeway for making mistakes or unwise expenditures (9:130).

During November of 1964, the Federal Extension Service cooperating with the Alabama Extension Service initiated a pilot program using para-professionals to teach nutrition to low-income homemakers in four counties (16:478).

The pilot effort proved to be very successful and the Expanded Food and Nutrition Education Program (EFNEP) quickly was initialed and became established in other states by Executive Order in 1968. *Wang. It is organ. (1*

By 1969, the program came into existence in all 50 states, the District of Columbia, Puerto Rico, and the Virgin Islands, and had become a regular part of the Cooperative Extension Service.

Tennessee began the program in 1968. The program was initiated in ten pilot counties. The following year ten more counties were added to the program and in 1971 the program expanded by an additional 20 counties. Thus, in 1973 the total state counties participating in EFNEP was 40.

II. NEED FOR THE STUDY

As stated in one of the early national evaluations of the Expanded Food and Nutrition Education Program, there has been ample evidence that the educational objectives were being met. However, it is noted, there is a continuing need for better evidence of success on which to base more precise allocation of Extension staff effort (4:3).

The report goes on to say that, because of the program's limited resources, it is essential that extra efforts be applied to families with the greatest need (4:19).

Program guidelines suggest that the program should work with the hard-to-reach, low-income families, but it has been difficult to identify those families with the greatest needs. Information has been lacking as to what characterizes families who show low nutritional knowledge regarding proper foods for their diets, and what characterizes those families who tend to increase in knowledge the most as a result of the EFNEP program.

This information should be valuable to Tennessee state nutrition specialists, trainer agents, and program assistants for use in the determination of future program direction.

III. STATEMENT OF THE PROBLEM

Prior to this study, no formal attempt had been made in Tennessee to compare data related to knowledge level of EFNEP family participants to other data collected and analyze on a statewide basis. Current data from national and state program evaluations were only available in frequency-count form from a computer printout, including such information as the number of homemakers who mentioned milk in the United States and by state, the number of urban homemakers in the United States and by state, etc.

Prior to the present study, no known effort had been made, using data from the existing reporting system (periodic unit reports), to relate

participant family knowledge of foods and their other characteristics, for example, place of residence. For this reason this study was designed.

IV. PURPOSE OF THE STUDY

Therefore, the purpose of this study was to determine the relations between homemakers' knowledge of foods in the basic four groups and their personal and family characteristics.

It also was designed to determine improvement in homemakers' knowledge of the food groups from initial to latest food recall. More specific objectives of this study were:

1. To determine the relation between homemakers' knowledge of each of the four food groups, the number of years of school completed by the homemakers and their ages.

2. To determine the relation between homemakers' knowledge of each of the four food groups and their place of residence, number of family members, number of dependent children, whether or not there were family members over 64 in the household, a family with dependent children, home ownership status, level of living index score of the family, ethnic background, total yearly income of the family, and whether or not there had been any change in monthly income from initial to latest food recall.

3. To determine the relation between homemakers' knowledge of each of the four food groups and whether or not the family was on welfare, received food assistance on a regular basis, date when the initial food recall was taken, the USDA food program available in the county, the recorded length of time the family had participated in the program, and

whether or not the family had had one or more than one program assistant working with it.

4. To determine the change in homemakers' knowledge of foods for health from the initial to the latest 24-hour food recall.

V. LIMITATION OF THE STUDY

The population of this study included only those participant families from the ten original Expanded Food and Nutrition Education Program counties in Tennessee.

The study was limited to one dependent variable and 24 independent variables. The dependent variable was knowledge of food for health in each of the four major food groups at first and latest food recalls. The 24 independent variables were grouped under the following three main headings: (1) personal homemaker characteristics; (2) family characteristics; and (3) factors concerning assistance received by families.

VI. DESCRIPTION OF TERMS

The following are descriptions of some terms used in this study:

Food knowledge. An indicator of food knowledge was obtained by the aide asking the homemakers to name foods necessary for health. Foods named were classified into one of the major food groups--milk, meat, fruit/vegetable, and bread/cereal. The sum of the four knowledge scores was called "knowledge of the four food groups". Homemakers naming a

food in a food group as being necessary for health were assumed to have some knowledge of the importance of that food group being in the family diet.

Food recall. This term indicates a record of foods homemaker felt were needed by people to keep them healthy. This information was collected by personal interview during regular home visits and included all meals, beverages, and snacks.

Program assistant. A paid nonprofessional employed by the Extension Service to teach nutrition to low-income families (also referred to elsewhere as para-professionals or program aides).

Trainer agent. A professional home economist employed by the Extension Service to select, train and supervise program assistants. She is responsible for the Expanded Food and Nutrition Education Program (EFNEP) in a county.

Knowledge score. Knowledge score was arrived at by counting the number of food groups named.

Food groups. The four food groups termed "Essentials of an Adequate Diet" include (1) the milk group, (2) the meat group, (3) the fruit and vegetable group and (4) the bread and cereal group.

VII. METHODS OF PROCEDURES

The Population

The population of this study included all homemakers in the Expanded Nutrition Program, from the ten original program counties who had been

participants for at least six months as of October, 1971, when the data were collected. The ten original Expanded Food and Nutrition Education Program counties in Tennessee were Roane, Hawkins, Putnam, Dekalb, Warren, Coffee, Robertson, Davidson, Shelby, and Gibson. The counties were fairly evenly distributed across the state, and at the time of the study, still included approximately 73 percent of the total number of participant families in Tennessee.

The Sample

The sample included 397 participant families, which represented a 5 percent sample from each of the ten original counties. It should be kept in mind that the sample study was representative only of program families in the ten original counties and not necessarily the entire state.

A 5 percent sample was decided upon as being adequate for this study. In order to obtain this size sample, it was requested that every fifteenth folder be pulled from the county files.

The Data

The University of Tennessee, Agricultural Extension Education Department with the assistance of Reginald William Seiders II collected the original data (19). The data were collected with the cooperation and assistance of Dr. Vernon W. Darter, Dean Emeritus of the Agricultural Extension Service of Tennessee, and other Extension personnel with the assurance that the identities of individual participants would be kept confidential. The individual family record forms were sent from the

counties involved to the State Extension office to be recorded. The data were collected and recorded from three family record forms. The record forms for each family included:

1. Family Record--Part 1. This form, of a descriptive nature, was filled out on each family as it became enrolled in the program (see Appendix A).

2. Family Record--Part 2. (Initial record). This form, which served as a benchmark, also was filled out when the family initially enrolled in the program (see Appendix B). Of primary concern to this study was item number 6, which will be referred to hereafter as the knowledge of food needed to keep healthy. It shows the kind and number of foods named from each of the major food groups that the homemaker of the family thought people should have to keep healthy.

3. Family Record--Part 2. (Latest record). In addition to the Family Record--Part 2 form being filled out for each family when it entered the program, the same form also served as a progress checking device to be filled out every six months thereafter. Only the initial and the latest recorded Family Record--Part 2's were considered in this study. Again, the foods identified from each major food group by the homemaker of the family that she thought people should have to keep healthy were of primary concern for comparison with the food named when the family first was enrolled.

Data Analysis

Data from the family record forms were coded, recorded, and punched on data cards. Most computations were made at The University of

Tennessee Computing Center. Some computations were necessarily done by hand.

A contingency table analysis program was used to determine the relations between food named by homemakers as being needed by people to keep healthy for each food group and for each of the 24 independent variables.

The program computed two-way tables consisting of column, row, and entire table percentages and frequencies. The statistical output of this program included chi square with degrees of freedom.

Although not stated, there were assumed null hypotheses for each independent variable. The form of the assumed null hypothesis was that no significant relation existed between the knowledge homemakers demonstrated regarding food needed to keep people healthy in each of the food groups and each of the independent variables. Chi square values achieving at least the .05 level of probability were accepted as significant.

CHAPTER II

RELATED LITERATURE

From the day Adam reportedly ate the forbidden fruit, man has incorporated his beliefs about food into his religion. He realized food was necessary for life and without food he would die. Man has concerned himself with what to eat and why for centuries.

Men first thought all food contained a single substance that the body could use. This substance extracted from the food after eaten. The residue that was of no value passed on through the body.

An attempt to apply analytical methods to the study of food was made by Sanctorius, an Italian physician, in the 17th century. A French chemist, Antoine Lavoisier led the way to studies of chemical reactions that took place when food was used by the body. Much progress has been made in the past 50 years in nutrition research (14:3).

Since 1936, food consumption surveys have been conducted by the U. S. Department of Agriculture's Agricultural Research Service. Diets recorded in these studies were rated according to the calorie allowances and the allowance of the seven nutrients as recommended by the Food and Nutrition Board of the National Academy of Science-National Research Council as adequate for maintaining good nutrition in healthy persons under current living conditions (15:3). The most recent of these surveys, completed in 1965, represented a more complete study of the food consumption of all individuals than any of the previous studies. All these

surveys, without exception, revealed similar results: Marked prevalence of dietary inadequacies as judged by recommended standards. The evidence is consistent (15:7).

Even though enough food is available in America so that all families could have a "good" diet, the 1965 food consumption studies showed that about one-half of the families actually had such a diet (22:319).

Fewer households had good diets in 1965 than in 1955. In 1955, 60 percent of the households reportedly had good diets; whereas in 1965, only 50 percent were reported. The decreased use of milk and milk products and fruits and vegetables was mainly responsible for the changes in the dietary levels. These foods are considered to be the most important source of calcium, vitamin A and ascorbic acid. In all groups, protein intake averaged higher than the recommended allowances. The study also indicated a need for better sources in iron, especially for infants, young children and for girls and women (10:123).

The goal of the Expanded Food and Nutrition Extension Education Program is not the number of families reached, but rather the number of families helped to gain knowledge of foods needed by people to keep them healthy.

Stiebeling (24:7) stated that to improve the situation we must understand why people make the food choices they do and how food habits can be modified to be in closer accordance with advancing knowledge of nutrition.

Levertson (12:321) suggests communications media handling of nearly every dietary choice has made the individual himself concerned with his

nutritional well being. Continual emphasis in advertising and in misdirected education on nutrient requirements and the specific functions of each nutrient leads many consumers to think in terms of isolated nutrients rather than of food. Leverton goes on to say that being impressed with his need for nutrients and often apprehensive about the wholesomeness of the food in the market place and the possible nutritive shortcomings of foods he likes, the individual turns to the use of nutrient concentrates and supplements for "safety".

A study by Pilgrim (17:20) found that the American male likes his food plain, simple, rating milk the most acceptable food, next to grilled steak, ice cream, french fried potatoes and hot biscuits. Only a few vegetables were well liked and were even less well accepted when sauces and dressings were added. The five most liked vegetables were tomatoes, potatoes, green peas, corn and green beans.

Hall and Hall (8:548) found a dislike for strong flavored vegetables to be exceeded only by a dislike for organ meats and shellfish in a survey of 693 university students (478 women and 215 men). They went on to say eggs were often listed as being disliked especially as related to some methods of preparation.

They also found preferred food vary with age and family concepts and include beef steak, milk, ice cream with chocolate as a favorite flavor. Methods of cooking the steak showed further differences of acceptance at the regional and socioeconomic levels.

Smith (20:101) in studies of 235 graduate students found that contacts made early in life greatly influence food acceptance and that

familiarity with food seems to be the important factor in food selection.

Lamb (11:20) states that, even though some aspects of accepted or rejected foods were similar for given age, socioeconomic level or educational background of the mother that basic physiological differences occur which are considered to be individualistically genetic.

→ He goes on to say that first in the food acceptance is the training of the young child to become familiar with a wide variety of foods effective in maintenance of health. This should be initiated at birth, supported in the home, continued by effective educational experiences in school life.

He also emphasized the fact that food aversions need to be recognized as being easier to prevent and control in the young than in the adult population. This is the challenge of nutrition education at all levels of learning starting with the young.

Levin (13) interviewed homemakers and found that the mother's concepts were the major influence on the food habits of the family. She established what was considered "food for us" and developed ideologies such as health, taste, status, and cost which family members acquired though they could seldom define the values involved. With a questionnaire made up of indirect questions and administered to 2,300 school children, Levin determined how children perceived food: as "conflict", "praise", or "scold" foods according to the "authority" in the home.

Levin and Bennett (13:645) reported that in a majority of American homes the major food decisions were made by the housewife. Thus,

concentration on nutritional education with the housewife alone would probably be most beneficial.

A Louisiana study by Brew (2:30) found in comparing two income groups of homemakers, 92 percent of the total sample stated milk as being necessary for good health, 96 percent of the upper income homemakers mentioned milk as being necessary as compared to 88 percent of the lower income groups.

There was a difference in comparing the two groups when meat was named as being necessary for good health. Ninety-seven percent of the homemakers saw meat as being necessary for good health whereas only 83 percent of the low-income homemakers stated the same.

There was very little difference between the two groups relative to their indication of vegetables and fruits being necessary for good health.

When broken down into the two income groups for food in the bread/cereals group, Brew's findings revealed that 83 percent of the upper income group named bread/cereals as being necessary to good health as compared to only 63 percent of the low-income homemakers.

When the data were studied in terms of the homemaker naming at least one food in each of the four food groups, it was found that 63 percent of the total sample did mention at least one.

The homemakers were asked to name foods they felt necessary for maintaining good health as a means of determining their knowledge of nutrition. More upper-income homemakers identified milk as being needed in the diet than did those in the lower-income group. Over 80 percent

of both groups viewed milk as being necessary. Ninety-seven percent of the upper-income group saw meat and meat substitutes as being needed as compared to only 83 percent of the lower-income group.

Ninety-six percent of the homemakers felt fruits/vegetables were needed in the diet. There was very little difference between the two income groups relative to knowledge about this last food group.

The upper-income group, however, was more knowledgeable relative to the necessity of food in the bread/cereals group.

Seventy-four percent of the upper-income homemakers named food from all four food groups compared to only 51 percent in the lower-income group.

A Maryland study by Wang and Ephross (26:2) reported the results of an evaluation which had been both encouraging and helpful. "Substantial improvements in food knowledge and consumption were evident," especially in the milk group. Number of visits to the homemaker in the first six months was positively associated with improved consumption of foods in the milk, fruit/vegetable group where it is most needed. Changes in nutritional knowledge appeared to be much more a function of the educational efforts of the aides than of homemakers' characteristics or initial knowledge level. They go on to say in conclusion that homemakers with poorest diets showed more improvement than those with better initial food consumption practices, but they also tended to stay in the program longer.

The review of related literature suggests that nutrition education needs to be made available to all segments of the population. Knowledge

as to what makes up a good diet is obviously not possessed by everyone. Today's challenge is to convince persons with poor diets to improve their food habits.

→ The Cooperative Extension Service since its inception has devoted many of its resources to nutrition programs for youth and adults and a variety of approaches has been used to reach its heterogeneous clientele (22:321). Only through various types of nutrition programs can Extension hope to improve human health. Nutrition education needs to be constant and continuous for all people.

CHAPTER III

FINDINGS OF THE STUDY

The findings will be presented in this chapter under the major headings of: (1) homemakers' knowledge of each food group and their personal characteristics; (2) homemakers' knowledge of diet in each food group and their family characteristics; and (3) homemakers' knowledge of each food group and factors associated with assistance received by families.

Homemakers' knowledge of each food group based on food recall, was presented in tabular form. Each table presents analysis of a different independent variable.

Tables are divided vertically into two knowledge food recalls (i.e., first and latest recall) in order to show change in knowledge score. The initial food recall was taken for all homemakers in the study when the family first entered the program. The latest food recall represents the latest recorded food recall for a participant family as of October, 1971 when the data were collected.

Under each food recall, tables are also divided into major food groups: (1) milk; (2) meat; (3) fruit/vegetables; (4) bread/cereals; and (5) all four food groups.

The chi square test was used to determine the horizontal relationship between homemakers' knowledge of diet for each food group according to food recall, and the independent variable.

Significance for the test was determined at the .05 probability level.

I. HOMEMAKERS' KNOWLEDGE OF FOODS NEEDED TO KEEP
HEALTHY AND THEIR PERSONAL CHARACTERISTICS

Place of Residence

Table I shows the percent of homemakers residing in urban, rural and farm areas, who named each of the basic food groups when the first and latest food recalls were taken. There were 244 homemakers with urban residence, 111 homemakers with rural residence and 42 homemakers with farm residence.

Milk group. For the milk group on the first food recall there was no significant relation between the homemakers who named milk as one of the food groups needed to keep healthy and their place of residence. However, a slightly higher percent of those with urban residence (77 percent) named milk when first entered the program as compared to those with rural and farm residence (74 percent). On the latest food recall there was a significant relation between homemakers who named milk and their place of residence. A higher percent of those with rural residence (96 percent) as compared to urban residence (91 percent) or farm residence (88 percent) named milk as one of the food groups needed to keep healthy.

Increase in knowledge of milk, from first to latest recall was greater among those of rural residence (22 percent) than among those of urban and farm residence (14 percent).

TABLE I
FOOD KNOWLEDGE OF HOMEMAKERS IN FOUR FOOD GROUPS BY PLACE OF RESIDENCE

Food Group Named	Place of Residence								
	Urban (N=244)			Rural (N=111)			Farm (N=42)		
	First	Latest	Change	First	Latest	Change	First	Latest	Change
	-----Homemakers Per 100-----								
Milk ^b	77	91	14	74	96	22	74	88	14
Meat ^a	90	94	4	73	93	20	79	93	14
Fruit/Vegetables ^{a,b}	93	97	4	85	92	7	83	98	15
Bread/Cereals ^a	70	87	17	58	86	28	69	79	10
All four food groups	54	79	25	43	74	31	52	71	19
Mean No. Named	3.3	3.7	0.4	2.9	3.7	0.8	3.0	3.6	0.6

^aFirst recall, χ^2 value achieved at least the .05 probability level.

^bLatest recall, χ^2 value achieved at least the .05 probability level.

Meat group. For the meat group on the first recall there was a significant relation between the homemaker who named meat as one of the food groups needed to keep healthy and their place of residence. A higher percent of those with urban residence (90 percent) named meat as compared to those of farm residence (79 percent) and rural residence (73 percent). On the latest food recall, there was no significant relation between homemakers who named meat and their place of residence. A higher percent of homemakers (almost 94 percent) in each place of residence named meat at the second recall period.

Increase in knowledge of meat from first to latest recall was greater among those of rural residence (20 percent) than among those of farm residence (14 percent) or urban residence (4 percent).

Fruit/vegetables group. For the fruit/vegetables group on the first food recall there was a significant relation between homemakers who named fruit/vegetables as one of the food groups needed to keep healthy and their place of residence. A higher percent of those with urban residence (93 percent) named fruit/vegetables as compared to those with rural residence (85 percent) or farm residence (83 percent). On the latest food recall, there was a significant relation between homemakers who named fruit/vegetables and their place of residence. An almost equal percent (98 and 97 percent) of the homemakers of farm and urban residence named fruit/vegetables. While a smaller percentage (92 percent) of those with rural residence named fruit/vegetables.

Increase in knowledge of fruit/vegetables from first to latest recall was greater among those of farm residence (15 percent) than among those of rural residence (7 percent) or urban residence (4 percent).

Bread/cereals group. For the bread/cereals group on the first food recall there was a significant relation between the homemakers who named bread/cereals as one of the food groups needed to keep healthy and their place of residence. An almost equal percent (69 and 70 percent) of farm and urban residence named bread/cereals as compared to 58 percent of the rural residence. On the latest food recall there was no significant relation between homemakers who named bread/cereals and their place of residence. However, a smaller percentage of the farm residents (79 percent) than of either the rural or urban residents (86 and 87 percent, respectively) named bread/cereals food group.

Increase in knowledge of bread/cereals from first to latest food recall was greater among those of rural residence (28 percent) than among those of urban residence (17 percent) or farm residence (10 percent).

All four food groups. For the four food groups on the first food recall there was no significant relation between the homemakers who named all four food groups as needed to keep healthy and their place of residence. However, a slightly higher percent of those of urban residence (54 percent) named the four food groups as compared to those of farm residence (52 percent) or rural residence (43 percent). On the latest food recall there was no significant relation between homemakers who named all four food groups and place of residence. However, a higher

percent of those of urban residence (79 percent) named all four food groups as compared to those of rural residence (74 percent) or farm residence (71 percent).

Increase in knowledge of all four food groups from first to latest recall was greater among those of rural residence (31 percent) than among those of urban residence (25 percent) or farm residence (19 percent).

Homemakers of urban residence named an average of 3.3 of the four food groups as needed to keep healthy on the first recall and 3.7 on the latest recall. Homemakers of rural residence named an average of 2.9 of the four food groups as needed to keep healthy on the first recall and 3.7 on the latest recall. Homemakers of farm residence named an average of 3.0 of the four food groups as needed to keep healthy on the first recall and 3.6 on the latest recall.

When those of rural residence were compared with those of farm residence as to the average number of food groups named at first and latest recall periods the latter group had an increase of 0.6 food groups named while the former had a 0.8 increase in average number of food groups named. Urban residence had an increase of 0.4 food groups named.

Race

Table II shows the percent of the black and white homemakers enrolled in the nutrition program, who named each of the basic four food groups when the first and latest food recalls were taken. There were 188 white homemakers and 209 black homemakers.

TABLE II

FOOD KNOWLEDGE OF HOMEMAKERS IN FOUR FOOD GROUPS BY RACE.

Food Group Named	Race					
	White (N=188)			Black (N=209)		
	First	Latest	Change	First	Latest	Change
	-----Homemakers Per 100-----					
Milk ^b	76	89	13	76	94	18
Meat ^{a,b}	73	89	16	94	98	4
Fruit/Vegetables ^{a,b}	86	93	7	94	98	4
Bread/Cereals ^a	57	82	25	75	88	13
All four food groups ^{a,b}	45	69	24	57	84	27
Mean No. Named	2.9	3.5	0.6	3.4	3.8	0.4

^aFirst recall, χ^2 value achieved at least the .05 probability level.

^bLatest recall, χ^2 value achieved at least the .05 probability level.

Milk group. For the milk group on the first food recall there was no significant relation between the homemakers who named milk as one of the food groups needed to keep healthy and their race. An equal percent of each race (76 percent) named milk when first entered the program. On the latest food recall there was a significant relation between homemakers who named milk and race. A higher percent of the black race (94 percent) as compared to white race (89 percent) named milk.

Increase in knowledge of milk from first to latest recall was greater among the black race (18 percent) than among the white race (13 percent).

Meat group. For the meat group on the first recall there was a significant relation between the homemakers who named meat as one of the food groups needed to keep healthy and their race. A higher percent of those of the black race (94 percent) named meat as compared to those of the white race (73 percent). On the latest food recall, there was a significant relation between homemakers who named meat and their race. A higher percent of those of the black race named meat (98 percent) as compared with those of the white race (89 percent).

Increase in knowledge of meat from first to latest recall was greater among those of the white race (16 percent) than among those of the black race (4 percent).

Fruit/vegetables group. For the fruit/vegetables on the first food recall there was a significant relation between the homemakers who named fruit/vegetables as one of the food groups needed to keep healthy and

their race. A higher percent of the black race (94 percent) named fruit/vegetables as compared to the white race (86 percent). On the latest food recall, there was a significant relation between homemakers who named fruit/vegetables and their race. A higher percent of the black race (98 percent) named fruit/vegetables as compared to white race (93 percent).

Increase in knowledge of fruit/vegetables from first to latest recall was greater among those of the white race (7 percent) than among those of the black race (4 percent).

Bread/cereals group. For the bread/cereals group on the first food recall there was a significant relation between homemakers who named bread/cereals as one of the food groups needed to keep healthy and their race. A higher percent of the black race (75 percent) named bread/cereals as compared to the white race (57 percent). On the latest food recall there was no significant relation between homemakers who named bread/cereals and race. However, a slightly higher percent of the black race (88 percent) named bread/cereals as compared to the white race (88 percent).

Increase in knowledge of bread/cereals from first to latest recall was greater among those of the white race (25 percent) than among those of the black race (13 percent).

All four food groups. For the four food groups on the first food recall there was a significant relation between the homemakers who named all four food groups as needed to keep healthy and their race. A higher

percent of those of the black race (57 percent) named the four food groups as compared to those of the white race (45 percent). On the latest food recall there was a significant relation between homemakers who named all four food groups and race. A higher percent of the black race (84 percent) named all four food groups as compared to those of the white race (69 percent).

Increase in knowledge of all four food groups from first to latest recall was greater among those of the black race (27 percent) than among those of the white race (24 percent).

Homemakers of the white race named an average of 2.9 of the four food groups as needed to keep healthy on the first recall and 3.5 on the latest recall. Homemakers of the black race named an average of 3.4 of the four food groups as needed to keep healthy on the first recall and 3.8 on the latest recall.

When those of the white race were compared with those of the black race the former group had an increase of 0.6 food groups named while the latter had a 0.4 increase in the average number of food groups named.

Age of Homemakers

Table III shows the percent of homemakers in three age categories who named each of the basic four food groups when first and latest food recalls were taken. There were 127 homemakers under 35 years of age, 199 homemakers between 35-64 years of age and 71 homemakers over 65 years of age.

TABLE III
FOOD KNOWLEDGE OF HOMEMAKERS IN FOUR FOOD GROUPS BY AGE

Food Group Named	Age of Homemaker							
	Under 35 (N=127)		35-64 (N=199)				65-Over (N=71)	
	First	Latest	Change	First	Latest	Change	First	Latest
	Homemakers Per 100-----							
Milk ^a	86	95	9	72	92	20	68	87
Meat	83	94	11	85	94	9	83	93
Fruit/Vegetables	91	96	5	91	96	5	85	94
Bread/Cereals	65	82	17	67	87	20	65	86
All four food groups ^b	53	70	17	49	81	32	49	75
Mean No. Named	3.3	3.6	0.3	3.2	3.7	0.5	3.0	3.6
								0.6

^aFirst recall, χ^2 value achieved at least the .05 probability level.

^bLatest recall, χ^2 value achieved at least the .05 probability level.

Milk group. For the milk group on the first food recall there was a significant relation between homemakers who named milk as one of the food groups needed to keep healthy and age of homemakers. A higher percent of those in the under 35 age group (86 percent) named milk when first entered the program as compared to those in the 35-64 age group (72 percent) or the 65 and over age group (68 percent). On the latest food recall there was no significant relation between homemakers who named milk and their age. However, a slightly higher percent of those under 35 years of age (95 percent) named milk as compared to those 35-64 years of age (92 percent) or the 65 years and over (87 percent) age groups.

Increase in knowledge of milk from first to latest recall was greater among those of 35-64 age group (20 percent) than among those in 65 and over age group (19 percent) or the under 35 age group (9 percent).

Meat group. For the meat group on the first recall there was no significant relation between homemakers who named meat as one of the food groups needed to keep healthy and their age. However, a slightly higher percent of those in the 35-64 age group (85 percent) named meat as compared to those in the under 35 age group and the 65 and over group (83 percent) respectively. On the latest food recall, there was no significant relation between homemakers who named meat and their age. A high percentage (about 94 percent) of all age groups named meat on the latest food recall.

Increase in knowledge of meat from first to latest recall was slightly greater among those under 35 age group (11 percent) than among

those in 65 and over age group (10 percent) or 35-64 age group (9 percent).

Fruit/vegetables group. For the fruit/vegetables group on the first food recall there was no significant relation between homemakers who named fruit/vegetables as one of the food groups needed to keep healthy and age. An equal percent of those in the under 35 and 35-64 age group (91 percent) named fruit/vegetables as compared to the 65 and over age group (85 percent). On the latest food recall, there was no significant relation between homemakers who named fruit/vegetables and their age. An equal percent (96 percent) of homemakers in the under 35 and 35-64 age group named fruit/vegetables as compared to those in the 65 and over age group (94 percent).

Increase in knowledge of fruit/vegetables from first to latest recall was greater among those in the 65 and over age group (11 percent) than among those under 35 and the 35-64 age group (5 percent, respectively).

Bread/cereals group. For the bread/cereals group on the first food recall there was no significant relation between the homemakers who named bread/cereals as one of the food groups needed to keep healthy and their age. An equal percent (65 percent) of the under 35 and the 65 and over age groups named bread/cereals as compared to 67 percent of the 35-64 age group. On the latest food recall there was no significant relation between homemakers who named bread/cereals and their age. An almost equal percent of the 65 and over and the 35-64 age group (86 and

87 percent, respectively) named bread/cereals as compared to 82 percent of the under 35 age group.

Increase in knowledge of bread/cereals from first to latest recall was greater among those of the 65 and over age group (21 percent) than among those 35-64 age group (20 percent) or the under 35 age group (17 percent).

All four food groups. For the four food groups on the first food recall there was no significant relation between the homemakers who named all four food groups as needed to keep healthy and their age. However, a slightly higher percent of those under 35 years of age (53 percent) named the four food groups as compared to an equal percent (49 percent) of those 35-64 and 65 and over age groups. On the latest food recall there was no significant relation between homemakers who named all four food groups and their age. However, a higher percent of the 35-64 age group (81 percent) named all four food groups as compared to 65 years of age (75 percent) or under 35 age group (70 percent).

Increase in knowledge of all four food groups from first to latest recall was greater among those in the 35-64 age group (32 percent) than among those in the 65 and over age group (26 percent) or the under 35 age group (17 percent).

Homemakers under 35 years of age named an average of 3.3 of the four food groups as needed to keep healthy on the first recall and 3.6 on the latest recall. Homemakers in the 35 to 64 age group named an average of

3.2 of the four food groups as needed to keep healthy on the first recall and 3.7 on the latest recall. Homemakers in the 65 and over age group named an average of 3.0 of the four food groups as needed to keep healthy on the first recall and 3.6 on the latest recall.

When those 65 and over were compared with those of 35-64 years of age, the latter group had an increase of 0.5 food groups named while the former had a 0.6 increase in the average number of food groups named. The under 35 age group had an increase of 0.3 food groups named.

Education of Homemakers

Table IV shows the percent of homemakers with under eight years of schooling and those with over eight years who named each of the basic four food groups when the first and latest food recalls were taken. The 397 homemakers were divided into two categories according to years of formal education completed. There were 161 homemakers with less than eight years of school and 236 homemakers with eight or more years of school.

Milk group. For the milk group on the first food recall there was a significant relation between the homemakers who named milk as one of the food groups needed to keep healthy and their educational level. A higher percent of those with eight and over years of formal education (79 percent) named milk as compared to those with less than eight years of formal education (71 percent). On the latest food recall there was no significant relation between homemakers who named milk and formal education. Equal percentages (92 percent) of the homemakers in each educational level named milk.

TABLE IV
FOOD KNOWLEDGE OF HOMEMAKERS IN FOUR FOOD GROUPS BY EDUCATION

Food Group Named	Education of Homemakers					
	Under 8 (N=161)			8 and Over (N=236)		
	First	Latest	Change	First	Latest	Change
	-----Homemakers Per 100-----					
Milk ^a	71	92	21	79	92	13
Meat	81	93	12	86	94	8
Fruit/Vegetables ^a	86	94	8	93	96	3
Bread/Cereals	63	89	26	69	83	14
All four food groups ^a	44	80	36	56	75	19
Mean No. Named	3.0	3.7	0.7	3.3	3.6	0.3

^aFirst recall; χ^2 value achieved at least the .05 probability level.

When first and latest recall knowledge scores were compared, those with less than eight years formal education had a higher increase in knowledge (21 percent) than did those with eight and over years of formal education (13 percent).

Meat group. For the meat group on the first food recall there was no significant relation between homemakers who named meat as one of the food groups needed to keep healthy and their educational level. However, a higher percent of those with eight and over years of formal education (86 percent) named meat as compared to those with less than eight years of formal education (81 percent). On the latest food recall there was no significant relation between homemakers who named meat and formal education. An almost equal percentage (93 and 94 percent) of the homamakers in each of the education groups named meat.

Increase in knowledge of meat from first to latest recalls was greater among those in less than eight years of formal education (12 percent) than among those with eight or more years (8 percent).

Fruit/vegetables group. For the fruit/vegetables group on the first recall there was a significant relation between the homemakers who named fruit/vegetables as one of the food groups needed to keep healthy and their educational level. A higher percent of those with eight and over years of formal education (93 percent) named fruit/vegetables as compared to those with less than eight years of formal education (86 percent) on the latest food recall, there was no significant relation between homemakers who named fruit/vegetables and formal

education. Of those with eight and over years of formal education 96 percent named fruit/vegetables compared to 94 percent of those with less than eight years of formal education.

When first and latest recall knowledge scores were compared those with less than eight years formal education had a higher increase in knowledge (8 percent) than did those with eight and over years of formal education (3 percent).

Bread/cereals group. For the bread/cereals group on the first recall there was no significant relation between the homemakers who named bread/cereals as one of the food groups needed to keep healthy and their educational level. However, a slightly higher percent of those with eight and over years of formal education (69 percent) named bread/cereals as compared to those with less than eight years of formal education (63 percent). On the latest recall, there was no significant relation between homemakers who named bread/cereals and formal education. Again, a slightly higher percentage of those with less than eight years of formal education (89 percent) named bread/cereals as compared to those with eight and over years of formal education (83 percent).

Increase in knowledge of bread/cereals from first to latest recall period was greater among those in less than eight years of formal education (26 percent) than among those in eight or more years (14 percent).

All four food groups. For the four food groups on the first food recall there was a significant relation between the homemakers who named the four food groups as needed to keep healthy and their educational level. A higher percent of those with eight and over years of formal education (56 percent) named the four food groups as compared to those with eight years of formal education (44 percent). On the latest food recall there was no significant relation between homemakers who named the four food groups and formal education. However, a higher percentage of those with less than eight years of formal education (80 percent) named the four groups as compared to those of eight and over years of formal education (75 percent).

Increase in knowledge of all four food groups from first to latest recall period was greater among those in less than eight years of formal education (36 percent) than among the eight or more years (19 percent).

Homemakers with less than eight years education named an average of 3.0 of the four food groups as needed to keep healthy on the first recall and 3.7 on the latest recall. Homemakers in the eight and over years education named an average of 3.3 of the food groups as needed to keep healthy on the first recall and 3.6 on latest recall.

When those with less than eight years education were compared with those of over eight years education the former group had an increase of 0.7 food groups named while the latter had a 0.3 increase in the average number of food groups named.

Time in Program

Table V shows the percent of homemakers enrolled in the nutrition program under two years and over two years who named each of the basic four food groups when the first and latest food recalls were taken. There were 220 homemakers with less than two years on the program and 177 with more than two years.

Milk group. For the milk group on the first food recall there was no significant relation between the homemakers who named milk as one of the food groups needed to keep healthy and length of time in the program. However, a slightly higher percent of those with less than two years on the program (77 percent) named milk when first entered the program as compared to those with two or more years on the program (75 percent). On the latest food recall there was no significant relation between homemakers who named milk and length of time on the program. However, a higher percent of those with two or more years in the program (94 percent) named milk as compared to those with less than two years in the program (90 percent).

Increase in knowledge of milk from first to latest recall was greater among those in the less than two years on the program (23 percent) than among those with two or more years on the program (19 percent).

Meat group. For the meat group on the first food recall there was no significant relation between the homemakers who named meat as one of the food groups needed to keep healthy and their length of time on the program. However, a higher percentage of those with less than two

TABLE V
FOOD KNOWLEDGE OF HOMEMAKERS IN FOUR FOOD GROUPS
BY TIME IN THE PROGRAM

Food Group Named	Time in Program					
	Under 2 Years (N=220)			2 Years-Over (N=177)		
	First	Latest	Change	First	Latest	Change
	-----Homemakers Per 100-----					
Milk	77	90	23	75	94	19
Meat	86	92	6	83	96	13
Fruit/Vegetables	92	95	3	88	96	8
Bread/Cereals ^b	70	80	10	62	93	31
All four food groups ^b	54	70	16	48	85	37
Mean No. Named	3.2	3.6	0.4	3.1	3.8	0.7

^b Latest recall, χ^2 value achieved at least the .05 probability level.

years in the program (86 percent) named meat as compared to those with two or more years in the program (83 percent). On the latest food recall, there was no significant relation between homemakers who named meat and length of time on the program. However, a higher percent of those with two or more years on the program (96 percent) named meat as compared with those of less than two years on the program (92 percent).

Increase in knowledge of meat from first to latest recall was greater among those with two or more years on the program (13 percent) than among those with less than two years on the program (6 percent).

Fruit/vegetables group. For the fruit/vegetables group on the first food recall there was no significant relation between the homemakers who named fruit/vegetables as one of the food groups needed to keep healthy and their length on the program. However, a higher percent of those with less than two years on the program (92 percent) named fruit/vegetables as compared to those with two or more years on the program (88 percent). On the latest food recall, there was no significant relation between homemakers who named fruit/vegetables and length of time on the program. An almost equal percent (95 and 96 percent) of the homemakers in each of the education groups named fruit/vegetables.

Increase in knowledge of fruit/vegetables from first to latest recall was greater among those in the two or more years on the program (8 percent) than among those with less than two years on the program (3 percent).

Bread/cereals group. For the bread/cereals group on the first recall there was no significant relation between the homemakers who named bread/cereals as one of the food groups needed to keep healthy and their length of time on the program. However, a higher percent of those with less than two years on the program (70 percent) named bread/cereals as compared to those with more than two years on the program (62 percent). On the latest food recall there was a significant relation between homemakers who named bread/cereals and length of time on the program. A higher percent of those with two or more years on the program (93 percent) named bread/cereals as compared to those with less than two years on the program (80 percent).

Increase in knowledge of bread/cereals from first to latest food recall was greater among those with two or more years on the program (31 percent) than among those with less than two years on the program (10 percent).

All four food groups. For the four food groups on the first food recall there was no significant relation between the homemakers who named all four food groups as needed to keep healthy and their length of time on the program. However, a higher percent of those with less than two years on the program (54 percent) named the four food groups as compared to those with two or more years on the program (48 percent). On the latest food recall there was a significant relation between homemakers who named all four food groups and length of time on the program. A higher percent of those with two or more years on the

program (85 percent) named all four food groups as compared to those with less than two years on the program (70 percent).

Increase in knowledge of all four food groups from first to latest recall was greatest among those with two or more years on the program (37 percent) than among those with less than two years on the program (16 percent).

Homemakers with less than two years on the program named an average of 3.2 of the four food groups as needed to keep healthy on the first recall and 3.6 on the latest recall. Homemakers in the two or more years on the program named an average of 3.1 of the four food groups as needed to keep healthy on the first recall and 3.8 on the latest recall.

When those with less than two years on the program were compared with those of two or more years on the program the latter group had an increase of 0.7 food groups named while the former had a 0.4 increase in the average number food groups named.

Income

Table VI shows the percent of homemakers in each of three income categories who named each of the basic four food groups when the first and latest food recalls were taken. There were 68 homemakers in the under \$1000, 211 homemakers in the \$1000 to \$2999 and 118 homemakers in the over \$3000.

Milk group. For the milk group on the first food recall there was no significant relation between the homemakers who named milk as one of

TABLE VI
FOOD KNOWLEDGE OF HOMEMAKERS IN FOUR FOOD GROUPS BY INCOME

Food Group Named	Income					
	Under \$1000 (N=68)		\$1000-\$2999 (N=211)		\$3000-Over (N=118)	
	First	Latest	Change	First	Latest	Change
	-----Homemakers Per 100-----					
Milk ^b	71	82	11	74	94	20
					81	94
						13
Meat ^a	81	88	7	82	94	12
					91	95
						4
Fruit/Vegetables ^a	81	91	10	91	96	5
					93	97
						4
Bread/Cereals ^a	59	82	23	65	87	22
					74	81
						7
All four food groups ^a	40	69	29	49	79	30
					61	76
						15
Mean No. Named	2.9	3.4	0.5	3.1	3.7	0.6
					3.4	3.7
						0.3

^aFirst recall, χ^2 value achieved at least the .05 probability level.

^bLatest recall, χ^2 value achieved at least the .05 probability level.

the food groups needed to keep healthy and their income. However, a higher percent of the over \$3000 income (81 percent) named milk when first entered the program as compared to the \$1000-\$2999 income group (74 percent) or the under \$1000 group (71 percent). On the latest food recall there was a significant relation between homemakers who named milk and their income. A smaller percentage of those with under \$1000 income (82 percent) named milk than was true for either of the higher income groups (94 percent).

Increase in knowledge of milk from first to latest recall was greater among those in \$1000-\$2999 income group (20 percent) than among those in the over \$3000 income (13 percent) or the under \$1000 income group (11 percent).

Meat group. For the meat group on the first recall there was a significant relation between homemakers who named meat as one of the food groups needed to keep healthy and their income. A higher percent of those in the over \$3000 income group (91 percent) named meat as compared to an almost equal percent (81 and 82 percent) in the under \$1000 and \$1000-\$2999 income groups. On the latest food recall, there was no significant relation between homemakers who named meat and their income. However, a slightly lower percentage of those in the lowest income group (88 percent) as compared to the other income groups (about 95 percent) named meat.

Increase in knowledge of meat from first to latest recall was greater among those in \$1000-\$2999 income group (12 percent) than among

those in the under \$1000 group (7 percent) or the over \$3000 income group (4 percent).

Fruit/vegetables group. For the fruit/vegetables group on the first food recall there was a significant relation between homemakers who named fruit/vegetables as one of the food groups needed to keep healthy and income. A slightly higher percent of the over \$3000 income group (93 percent) named fruit/vegetables as compared to the \$1000-\$2999 income group (91 percent) or the under \$1000 income group (81 percent). On the latest food recall, there was no significant relation between homemakers who named fruit/vegetables and income. An almost equal percent (96 and 97 percent) in the \$1000-\$2999 and over \$3000 income named fruit/vegetables as compared to those in the under \$1000 income (91 percent).

Increase in knowledge of fruit/vegetables from first to latest recall was greater among those in the under \$1000 income (10 percent) than among those in the \$1000-\$2999 income (5 percent) or the over \$3000 income (4 percent).

Bread/cereals group. For the bread/cereals group on the first food recall there was a significant relation between the homemakers who named bread/cereals as one of the food groups needed to keep healthy and their income. A higher percent of those in the over \$3000 income group (74 percent) named bread/cereals as compared to the \$1000-\$2999 income group (65 percent) or the under \$1000 income group (59 percent). On the latest food recall there was no significant relation between

homemakers who named bread/cereals and income. However, a higher percent of the \$1000-\$2999 income group (87 percent) named the bread/cereals food group as compared to almost equal percent (81-82 percent) in the over \$3000 and the under \$1000 income groups.

Increase in knowledge of bread/cereals from first to latest recall was greater among those in the under \$1000 income (23 percent) than among \$1000-\$2999 income group (22 percent) or the over \$3000 income group (7 percent).

All four food groups. For the four food groups on the first food recall there was a significant relation between the homemakers who named all four food groups as needed to keep healthy and income. A higher percent of those in the over \$3000 income (61 percent) named the four food groups as compared to those in the \$1000-\$2999 income group (49 percent) or the under \$1000 income groups (40 percent). On the latest food recall there was no significant relation between homemakers who named all four food groups and their income. However, a higher percent of those in the \$1000-\$2999 income (79 percent) named all four food groups as compared to those in the over \$3000 income (76 percent) or the under \$1000 income (69 percent).

Increase in knowledge of all four food groups from first to latest recall was greater among those in the \$1000-\$2999 income groups (30 percent) than among those in the under \$1000 income (29 percent) or the over \$3000 income group (15 percent).

Homemakers in the under \$1000 income named an average of 2.9 of the four food groups as needed to keep healthy on the first recall and

3.4 on the latest recall. Homemakers in the \$1000-\$2999 income named an average of 3.1 of the four food groups as needed to keep healthy on the first recall and 3.7 on the latest recall. Homemakers in the over \$3000 income named an average of 3.4 of the four food groups as needed to keep healthy on the first recall and 3.7 on the latest recall.

When homemakers in the \$1000-\$2999 income group were compared with those in the under \$1000 income group the latter had an increase of 0.5 food group named while the former had a 0.6 increase in number of food groups named. Those in the over \$3000 income group had an increase of 0.3 food groups named.

Level of Living

Table VII shows the percent of homemakers classified into low and high level of living categories, who named each of the basic four food groups when the first and latest food recalls were taken. There were 180 homemakers classified as low and 217 in the high level of living category.

Milk group. For the milk group on the first food recall there was a significant relation between the homemakers who named milk as one of the food groups needed to keep healthy and level of living. An equal percent of each group (76 percent) named milk when first entered the program. On the latest food recall there was a significant relation between homemakers who named milk and level of living. A higher percent of those in the high level of living group (93 percent) named milk as compared to those in the low level of living group (91 percent).

TABLE VII

FOOD KNOWLEDGE OF HOMEMAKERS IN FOUR FOOD GROUPS BY LEVEL OF LIVING

Food Group Named	Level of Living					
	0-1 Low (N=180)			4-Over High (N=217)		
	First	Latest	Change	First	Latest	Change
	-----Homemakers Per 100-----					
Milk	76	91	15	76	93	17
Meat ^{a,b}	80	89	9	88	97	9
Fruit/Vegetables	87	95	8	92	96	4
Bread/Cereals ^b	64	80	16	68	90	22
All four food groups ^b	49	70	21	53	82	29
Mean No. Named	3.1	3.5	0.4	3.2	3.8	0.6

^aFirst recall, χ^2 value achieved at least the .05 probability level.

^bLatest recall, χ^2 value achieved at least the .05 probability level.

Increase in knowledge of milk from first to latest recall was greater among those in the high level of living group (17 percent) than among those in the low level of living group (15 percent).

Meat group. For the meat group on the first food recall there was a significant relation between the homemakers who named meat as one of the food groups needed to keep healthy and level of living. A higher percent of those in the high level of living group (88 percent) named meat as compared to those with low group (80 percent). On the latest food recall, there was a significant relation between homemakers who named meat and level of living. A higher percent of those with a high level of living (93 percent) named meat as compared with those with a low level of living (91 percent).

Increase in knowledge of meat from first to latest recall was equal in both level of living groups (9 percent).

Fruit/vegetables group. For the fruit/vegetables group on the first food recall there was no significant relation between the homemakers who named fruit/vegetables as one of the food groups needed to be healthy and level of living. However, a slightly higher percent of those with a high level of living (92 percent) named fruit/vegetables as compared to those with a low level of living (87 percent). On the latest food recall, there was no significant relation between homemakers who named fruit/vegetables and level of living. An almost equal percent (95 and 96 percent) of the homemakers in each of the level of living groups named fruit/vegetables.

Increase in knowledge of fruit/vegetables from first to latest recall was greater among those with a low level of living (8 percent) than among those with a high level of living (4 percent).

Bread/cereals group. For the bread/cereals group on the first food recall there was no significant relation between homemakers who named bread/cereals as one of the food groups needed to keep healthy and their level of living. However, a higher percent of those with a high level of living (68 percent) named bread/cereals as compared to those with a low level of living (64 percent). On the latest food recall there was a significant relation between homemakers who named bread/cereals and their level of living. A higher percent of those with a high level of living (90 percent) named bread/cereals as compared to those with a low level of living (80 percent).

Increase in knowledge of bread/cereals from first to latest recall was greater among those with a high level of living (22 percent) than among those with a low level of living (16 percent).

All four food groups. For the four food groups on the first food recall there was no significant relation between the homemakers who named all four food groups as needed to keep healthy and their level of living. However, a slightly higher percent of those with a high level of living (53 percent) named the four food groups as compared to those with a low level of living (49 percent). On the latest food recall there was a significant relation between the homemakers who named all four food groups and their level of living. A higher percent of

those with a high level of living (82 percent) named all four food groups as compared to those with a low level of living (70 percent).

Increase in knowledge of all four food groups from first to latest recall was greater among those with a high level of living (29 percent) than among those with a low level of living (21 percent).

Homemakers with a low level of living named an average of 3.1 of the four food groups as needed to keep healthy on the first recall and 3.5 on the latest recall. Homemakers with a high level of living named an average of 3.2 of the four food groups as needed to keep healthy on the first recall and 3.8 on the latest recall.

When those with a high level of living were compared with those having a low level of living the latter group had an increase of 0.4 food group named while the former had a 0.6 increase in the average number food groups named.

Home Ownership

Table VIII shows the percent of homemakers renting and owning their homes, who named each of the basic four food groups when first and latest food recalls were taken. There were 149 homemakers who own their homes and 248 homemakers who rented.

Milk group. For the milk group on the first food recall there was no significant relation between the homemakers who named milk as one of the food groups needed to keep healthy and home ownership. However, a higher percent of those who own their home (80 percent) named milk as compared to those who rent (76 percent). On the latest food recall

TABLE VIII

FOOD KNOWLEDGE OF HOMEMAKERS IN FOUR FOOD GROUPS BY HOME OWNERSHIP

Food Group Named	Home Ownership					
	Owner (N=149)			Renter (N=248)		
	First	Latest	Change	First	Latest	Change
	-----Homemakers Per 100-----					
Milk	80	91	11	76	92	16
Meat	85	95	10	84	92	8
Fruit/Vegetables	92	95	3	89	96	7
Bread/Cereals	69	87	18	65	85	20
All four food groups ^a	56	80	24	48	76	28
Mean No. Named	3.3	3.7	0.4	3.1	3.6	0.5

^aFirst recall, χ^2 value achieved at least the .05 probability level.

there was no significant relation between homemakers who named milk and home ownership. An almost equal percentage (91 and 92 percent) in each of the ownership groups named milk.

Increase in knowledge of milk from first to latest recall was greater among those who rent their home (16 percent) than among those who own their home (11 percent).

Meat group. For the meat group on the first food recall there was no significant relation between the homemakers who named meat as one of the food groups needed to keep healthy and home ownership. An almost equal percentage (85 and 84 percent) of the homemakers in each ownership group named meat. On the latest food recall, there was no significant relation between homemakers who named meat and home ownership. However, a higher percent of those who owned their homes (95 percent) as compared to those who rent (92 percent) named meat.

Increase in knowledge of meat from first to latest recall was greater among those who owned their homes (10 percent) than among those who rented their homes (8 percent).

Fruit/vegetables group. For the fruit/vegetables group on the first food recall there was no significant relation between the homemakers who named fruit/vegetables as one of the food groups needed to keep healthy and their home ownership. However, a higher percentage of those who own their home (92 percent) named fruit/vegetables as compared to those who rent their home (89 percent). On the latest food recall, there was no significant relation between homemakers who named

fruit/vegetables and home ownership. An almost equal percent (95 and 96 percent) of the homemakers in each ownership group named fruit/vegetables.

Increase in knowledge of fruit/vegetables from first to latest recall was greater among those who rent (7 percent) than among those who owned their homes (3 percent).

Bread/cereals group. For the bread/cereals group on the first food recall there was no significant relation between the homemakers who named bread/cereals as one of the food groups needed to keep healthy and home ownership. However, a slightly higher percent of those who owned their homes (69 percent) named bread/cereals as compared to those who rented their home (65 percent). On the latest food recall there was no significant relation between homemaker who named bread/cereals and home ownership. However, a slightly higher percent of those who own their home (87 percent) named bread/cereals as compared to those who rented their home (85 percent).

Increase in knowledge of bread/cereals from first to latest recall was greater among those who rented their home (20 percent) than those who owned their home (18 percent).

All four food groups. For the four food groups on the first food recall there was a significant relation between the homemakers who named all four food groups as needed to keep healthy and home ownership. A higher percent of those who owned their home (56 percent) named the four food groups as compared to those who rented (48 percent). On the

latest food recall there was no significant relation between homemakers who named all four food groups and home ownership. However, a higher percent of those who owned their home (80 percent) named all four food groups as compared to those who rented their home (76 percent).

Increase in knowledge of all four food groups from first to latest food recall was greater among those who rented their home (28 percent) than among those who owned their home (24 percent).

Homemakers who owned their home named an average of 3.3 of the four food groups as needed to keep healthy on the first recall and 3.7 on the latest recall. Homemakers who rented named an average of 3.1 of the food groups as needed to keep healthy on first recall and 3.6 on the latest recall.

When those who own their home were compared with those who rent their home the former group had an increase of 0.4 food groups named while the latter had a 0.5 increase in the average number food groups named.

II. HOMEMAKERS' KNOWLEDGE OF FOODS NEEDED TO KEEP HEALTHY AND THEIR FAMILY CHARACTERISTICS

Number Family Members

Table IX shows the percent of homemakers having varying number of persons in their family, who named each of the basic four food groups when the first and latest recall was taken. There were 122 homemakers with 1-2 family members, 112 with 3-4 and 163 with 5 and over family members.

TABLE IX
FOOD KNOWLEDGE OF HOMEMAKERS IN FOUR FOOD GROUPS BY NUMBER OF FAMILY MEMBERS

Food Group Named	Number Family Members									
	1-2 (N=122)		3-4 (N=112)				5-Over (N=163)			
	First	Latest	Change	First	Latest	Change	First	Latest	Change	Change
	-----Homemakers Per 100-----									
Milk ^{a,b}	66	87	21	83	95	12	78	94	16	
Meat ^b	85	92	7	80	97	17	87	93	6	
Fruit/Vegetables	91	95	4	87	96	9	91	95	4	
Bread/Cereals	65	83	18	66	89	23	68	95	27	
All four food groups	45	74	29	55	80	25	53	77	24	
Mean No. Named	3.1	3.5	0.4	3.2	3.8	0.6	3.2	3.7	0.5	

^aFirst recall, χ^2 value achieved at least the .05 probability level.

^bLatest recall, χ^2 value achieved at least the .05 probability level.

Milk group. For the milk group on the first food recall there was a significant relation between the homemakers who named milk as one of the food groups needed to keep healthy and family members. A higher percent of the families with 3-4 members (83 percent) named milk when first entered the program as compared to the families having 5 and over members (78 percent) or families with only 1-2 members (66 percent). On the latest food recall there was a significant relation between homemakers who named milk and number family members. A higher percent (83 percent) of those with 3-4 family members named milk as compared to those with 5 and over family members (78 percent) or the families with 1-2 persons (66 percent). On the latest food recall there was a significant relation between homemakers who named milk and number of family members. An almost equal percent (94-95 percent) of those with 3-4 and those with 5 and over family members named milk as compared to those with 1-2 family members (87 percent).

Increase in knowledge of milk from first to latest recall was greater among those with 1-2 family members (21 percent) than among those with 5 and over family members (16 percent) or those with 3-4 family members (12 percent).

Meat group. For the meat group on the first recall there was no significant relation between homemakers who named meat as one of the food groups needed to keep healthy and number family members. However, a higher percent of those with 5 and over family members (87 percent) named meat as compared to those with 1-2 family members (85 percent).

On the latest food recall, there was a significant relation between homemaker who named meat and number of family members. Size of family had no measurable influence on whether or not the homemaker named the meat group. A high percent of all homemakers named this food group.

Increase in knowledge of meat from first to latest recall was greater among those with 3-4 family members (17 percent) than among those with 1-2 family members (7 percent) or those with 5 and over family members (6 percent).

Fruit/vegetables group. For the fruit/vegetables group on the first food recall there was no significant relation between the homemakers who named fruit/vegetables as one of the food groups needed to keep healthy and number of family members. Percentagewise there was almost no difference between the three family size groups. On the latest food recall there was no significant relation between homemakers who named fruit/vegetables and number of family members. Size of family had no measurable influence on whether or not the homemakers named fruit/vegetables group. A high percentage of all homemakers named this food group.

Increase in knowledge of fruit/vegetables from first to latest recall was greater among those with 3-4 family members (9 percent) than among those with either 1-2 or 5 and over family members (4 percent).

Bread/cereals group. For the bread/cereals group on the first recall there was no significant relation between the homemakers who named bread/cereals as one of the food groups needed to keep healthy

and number of family members. Only a slightly higher percentage of those with 5 and over family members (68 percent) named bread/cereals as compared to an almost equal percent (65-66 percent) of those having 1-2 and 3-4 family members. On the latest recall there was no significant relation between homemakers who named bread/cereals and number of family members. However, a higher percent of those with 5 and over family members (95 percent) as compared to those with 3-4 family members (89 percent) or those with 1-2 family members (83 percent) named the bread/cereals food group.

Increase in knowledge of bread/cereals from first to latest recall was greater among those with 5 and over family members (27 percent) than among those with 3-4 family members (23 percent) or those with only 1-2 family members (18 percent).

All four food groups. For the four food groups on the first food recall there was no significant relation between the homemakers who named all four food groups as needed to keep healthy and number of family members. However, a higher percent of those with 3-4 family members (55 percent) named the four food groups as compared to those with 5 and over family members or those with only 1-2 family members (45 percent). On the latest food recall there was no significant relation between the homemakers who named all four food groups and number family members. However, a higher percent of those with 3-4 family members (80 percent) named all four food groups as compared to those with either 5 and over family members (77 percent) or those with only 1-2 family members (74 percent).

Increase in knowledge of all four food groups from first to latest recall was greater among those with 1-2 family members (29 percent) than among those with either 3-4 family members (25 percent) or the 5 and over (24 percent) family members.

Homemakers with 1-2 family members named an average of 3.1 of the four food groups as needed to keep healthy on the first recall and 3.5 on the latest recall. Homemakers with 3-4 family members named an average of 3.2 of the four food groups as needed to keep healthy on the first recall and 3.8 on the latest recall. Homemakers with 5 and over family members named an average of 3.2 of the four food groups as needed to keep healthy on the first recall and 3.7 on the latest recall.

When homemakers with 3-4 family members were compared with those having 5 and over family members, the latter had an increase of 0.5 food groups named, while the former had 0.6 increase in the average number of food groups named. Homemakers with only 1-2 family members had an increase of 0.4 food groups named.

Children Under 15

Table X shows the percent of homemakers with and without children under 15 years of age, who named each of the basic four food groups when the first and latest food recalls were taken. One hundred forty-two homemakers did not have children under 15 and 255 homemakers did have children under 15 years of age.

Milk group. For the milk group on the first food recall there was a significant relation between homemakers who named milk as one of the

TABLE X
FOOD KNOWLEDGE OF HOMEMAKERS IN FOUR FOOD GROUPS
BY CHILDREN UNDER 15

Food Group Named	Children					
	None (N=142)			Yes (N=255)		
	First	Latest	Change	First	Latest	Change
	-----Homemakers Per 100-----					
Milk ^{a,b}	70	87	17	79	95	16
Meat	84	92	8	84	95	11
Fruit/Vegetables	89	94	15	90	97	9
Bread/Cereals	64	85	21	68	86	18
All four food groups ^a	45	74	29	54	78	24
Mean No. Named	3.1	3.6	0.5	3.2	3.7	0.5

^aFirst recall, χ^2 value achieved at least the .05 probability level.

^bLatest recall, χ^2 value achieved at least the .05 probability level.

food groups needed to keep healthy and having family members under 15 years of age. A higher percent of those with family members under 15 years of age (79 percent) named milk as compared to those with no family members under 15 years of age (70 percent). On the latest food recall there was a significant relation between homemakers having named milk and their having members under 15 years of age. A higher percent of those with family members under 15 years of age (95 percent) named milk as compared to those with no family members (87 percent) under 15 years of age.

Increase in knowledge of milk from first to latest recall was slightly greater among those with no family members (17 percent) under 15 years of age than among those with family members 15 years of age (16 percent).

Meat group. For the meat group on the first food recall there was no significant relation between homemakers who named meat as one of the food groups needed to keep healthy and having family members under 15 years of age. An equal percent of (84 percent) homemakers in each of the family groups named meat. On the latest food recall, there was no significant relation between homemakers who named meat and family members under 15 years of age. However, a slightly higher percent of those with family members under 15 (95 percent) years of age named meat as compared to those with no family members under 15 (92 percent).

Increase in knowledge of meat from first to latest recall was greater among those with family members under 15 years of age (11 percent) than among those with no member under 15 (8 percent).

Fruit/vegetables group. For fruit/vegetables group on the first food recall there was no significant relation between the homemakers who named fruit/vegetables as one of the food groups needed to keep healthy and having family members under 15 years of age. However, a slightly higher percent of those families with members under 15 years of age (90 percent) named fruit/vegetables as compared to no family members under 15 years of age (89 percent). On the latest food recall, there was no significant relation between homemakers who named fruit/vegetables and having family members under 15 years of age. However, a higher percent of those homemakers with family members under 15 years of age (97 percent) named fruit/vegetables as compared with those with no family members under 15 years of age (94 percent).

Increase in knowledge of fruit/vegetables was greater among those with no family members under 15 years of age (15 percent) than among those with members 15 years of age (9 percent).

Bread/cereals group. For the bread/cereals group on the first food recall there was no significant relation between homemakers who named bread/cereals as one of the food groups needed to keep healthy and having family members under 15 years of age. However, a higher percent of those with family members under 15 years of age (68 percent) named bread/cereals as compared to those with no family members under 15 years of age (64 percent). On the latest food recall there was no significant relation between homemakers who named bread/cereals and having family members under 15 years of age. An almost equal percentage (85 and 86 percent) of the homemakers in each of the member groups named bread/cereals.

Increase in knowledge of bread/cereals from first to latest recall was greater among those with no family members under 15 years of age (21 percent) than among those with family members under 15 years of age (18 percent).

All four food groups. For the four food groups on the first food recall there was a significant relation between the homemakers who named all four food groups as needed to keep healthy and having family members under 15 years of age. A smaller percent of those with no members under 15 years of age (45 percent) named the four food groups as compared to those with family members under 15 years of age (54 percent). On the latest food recall there was no significant relation between homemakers who named all four food groups and having family members under 15 years of age. However, a slightly higher percentage of those homemakers with family members under 15 years of age (78 percent) named all four food groups as compared to those with no member under 15 years of age (74 percent).

Increase in knowledge of all four food groups from first to latest food recall was greater among those with no family member under 15 years of age (29 percent) than among those with family members 15 years of age (24 percent).

Homemakers without members of family under 15 years of age named an average of 3.1 of the four food groups as needed to keep healthy on the first food recall and 3.6 on the latest recall. Homemakers with family members under 15 years of age named an average of 3.2 of the

four food groups as needed to keep healthy on the first recall and 3.7 on the latest recall.

When the family with no members under 15 years of age were compared with those with family members under 15 years of age the two groups were about equal in average numbers food groups named.

Number of Children in School

Table XI shows the percent of homemakers with and without children in school, who named each of the basic four food groups when the first and latest food recall were taken. There were 194 with no children in school and 203 with one or more children in school.

Milk group. For the milk group on the first food recall there was a significant relation between homemakers who named milk as one of the food groups needed to keep healthy and children in school. A higher percent of those with one or more children in school (80 percent) named milk when first entered the program as compared to those with no children in school (71 percent). On the latest food recall there was no significant relation between homemakers who named milk and children in school. However, a higher percent of those with one or more children in school (94 percent) named milk as compared to those with no children in school (90 percent).

Increase in knowledge of milk from first to latest recall was greater among those with no children in school (19 percent) than among those with one or more children in school (14 percent).

TABLE XI
FOOD KNOWLEDGE OF HOMEMAKERS IN FOUR FOOD GROUPS
BY NUMBER OF CHILDREN IN SCHOOL

Food Group Named	Number of Children					
	None (N=194)			One-More (N=203)		
	First	Latest	Change	First	Latest	Change
	-----Homemakers Per 100-----					
Milk ^a	71	90	19	80	94	14
Meat	83	92	9	85	95	10
Fruit/Vegetables	89	95	6	91	96	5
Bread/Cereals	64	85	21	68	86	18
All four food groups	49	74	25	53	79	26
Mean No. Named	3.1	3.6	0.5	3.3	3.7	0.4

^aFirst recall, χ^2 value achieved at least the .05 probability level.

Meat group. For the meat group on the first food recall there was no significant relation between the homemakers who named meat as one of the food groups needed to keep healthy and children in school. However, a higher percent of those with one or more children in school (85 percent) named meat as compared to those with no children in school (83 percent). On the latest food recall, there was no significant relation between homemakers who named meat and children in school. However, a higher percent of those with one or more children in school (95 percent) named meat as compared with those having no children in school (92 percent) named meat.

Increase in knowledge of meat from first to latest food recall was greater among those with one or more children in school (10 percent) than among those with no children in school (9 percent).

Fruit/vegetables group. For the fruit/vegetables group on the first food recall there was no significant relation between the homemakers who named fruit/vegetables as one of the food groups needed to keep healthy and children in school. However, a higher percent of those with children in school (91 percent) named fruit/vegetables as compared to those with no children in school (89 percent). On the latest food recall, there was no significant relation between homemakers who named fruit/vegetables and children in school. An almost equal percent (95 and 96 percent) of the homemakers in each group named fruit/vegetables.

Increase in knowledge of fruit/vegetables from first to latest food recall was greater among those in the no children in school

(6 percent) than among those with one or more children in school (5 percent).

Bread/cereals group. For the bread/cereals group on the first food recall there was no significant relation between the homemakers who named bread/cereals as one of the food groups needed to keep healthy and children in school. However, a slightly higher percent of those with one or more children in school (68 percent) named bread/cereals as compared to those with no children in school (64 percent). On the latest food recall there was no significant relation between homemakers who named bread/cereals and children in school. However, an almost equal percent (85 and 86 percent) of those in both school groups named bread/cereals.

Increase in knowledge of bread/cereals from first to latest food recall was greater among those with no children in school (21 percent) than among those with one or more children in school (18 percent).

All four food groups. For the four food groups on the first food recall there was no significant relation between homemakers who named all four food groups as needed to keep healthy and children in school. However, a higher percent of those with one or more children in school (53 percent) named the four food groups as compared to those with no children in school (49 percent). On the latest food recall there was no significant relation between homemakers who named all four food groups and children in school. However, a higher percent of those with one or more children in school (79 percent) named all four food groups as compared to those with no children in school (74 percent).

Increase in knowledge of all four food groups from first to latest food recall was slightly greater among those with one or more children in school (26 percent) than among those with no children in school (25 percent).

Homemakers with no children in school named an average of 3.1 of the four food groups as needed to keep healthy on the first food recall and 3.6 on the latest recall. Homemakers with one or more children in school named an average 3.3 of the four food groups as needed to keep healthy on the first food recall and 3.7 on the latest recall.

When those with no children in school were compared with those of one or more children in school the latter group had an increase of 0.4 food groups named while the former had 0.5 increase in the average number food groups named.

Children Receiving School Lunches

Table XII shows the percent of homemakers who did and did not have children on school lunch, who named each of the basic four food groups when the first and latest food recalls were taken. There were 207 with no children on school lunch and 190 with one or more children on school lunch.

Milk group. For the milk group on the first food recall there was a significant relation between homemakers who named milk as one of the food groups needed to keep healthy and children on school lunch. A higher percent of those with one or more children on school lunch (80 percent) named milk when first entered the program as compared to

TABLE XII
FOOD KNOWLEDGE OF HOMEMAKERS IN FOUR FOOD GROUPS BY
CHILDREN RECEIVING SCHOOL LUNCH

Food Group Named	Children Receiving School Lunch					
	None (N=207)			One or More (N=190)		
	First	Latest	Change	First	Latest	Change
	-----Homemakers Per 100-----					
Milk ^a	72	90	18	80	94	14
Meat	83	92	9	85	95	10
Fruit/Vegetables	90	95	5	90	96	6
Bread/Cereals	64	84	20	68	87	19
All four food groups	48	73	25	54	81	27
Mean No. Named	3.1	3.6	0.5	3.3	3.7	0.4

^aFirst recall, χ^2 value achieved at least the .05 probability level.

^bLatest recall, χ^2 value achieved at least the .05 probability level.

those with no children on school lunch (72 percent). On the latest recall there was no significant relation between homemakers who named milk and children on school lunch. However, a higher percent of those with one or more children on school lunch (94 percent) named milk as compared to those with no children on school lunch (90 percent) named milk.

Increase in knowledge of milk from first to latest recall was greater among those with no children on school lunch (18 percent) than among those with one or more children on school lunch.

Meat group. For the meat group on the first food recall there was no significant relation between the homemakers who named meat as one of the food groups needed to keep healthy and children on school lunch. However, a higher percent of those with one or more children on school lunch (85 percent) named meat as compared to those with no children on school lunch (83 percent). On the latest food recall, there was no significant relation between homemakers who named meat and children on school lunch. However, a higher percent of those with one or more children on school lunch (95 percent) as compared with those of no children on school lunch (92 percent) named meat.

Increase in knowledge of meat from first to latest food recall was slightly greater among those with one or more children on school lunch (10 percent) than among those without children on school lunch (9 percent).

Fruit/vegetables group. For the fruit/vegetables group on the first food recall there was no significant relation between the

homemakers who named fruit/vegetables as one of the food groups needed to keep healthy and children on school lunch. However, an equal percent (90 percent) of both groups on school lunch named fruit/vegetables. On the latest food recall, there was no significant relation between homemakers who named fruit/vegetables and children on school lunch. An almost equal percent (95 and 96 percent) of the homemakers in each school lunch group named fruit/vegetables.

Increase in knowledge of fruit/vegetables from first to latest recall was greater among those in the one or more children on school lunch (6 percent) than among those with no children on school lunch (5 percent).

Bread/cereals group. For the bread/cereals group on the first food recall there was no significant relation between the homemaker who named bread/cereals as one of the food groups needed to keep healthy and children on school lunch. However, a higher percent of those with one or more children on school lunch (68 percent) named bread/cereals as compared to those with no children on school lunch (64 percent). On the latest food recall there was no significant relation between homemakers who named bread/cereals and members on school lunch. However, a higher percent of those with one or more children on school lunch (87 percent) as compared to those with no children on school lunch (84 percent) named bread/cereals.

Increase in knowledge of bread/cereals from first to latest food recall was greater among those with no children on school lunch

(20 percent) than among those with one or more children on school lunch (19 percent).

All four food groups. For the four food groups on the first food recall there was no significant relation between homemakers who named all four food groups as needed to keep healthy and children on school lunch. However, a higher percent of those with one or more children on school lunch (54 percent) named the four food groups as compared to those with no children on school lunch (48 percent). On the latest food recall there was a significant relation between homemakers who named all four groups and children on school lunch. However, a higher percent of those with one or more children on school lunch (81 percent) named all four food groups as compared to those with no children on school lunch, named all four food groups.

Increase in knowledge of all four food groups from first to latest recall was greater among those with one or more children on school lunch (27 percent) than among those with no children in school lunch (25 percent).

Homemakers with no children on school lunch named an average of 3.1 of the four food groups as needed to keep healthy on the first food recall and 3.6 on the latest recall. Homemakers with one or more children on school lunch named an average of 3.3 of the four food groups as needed to keep healthy on the first food recall and 3.7 on the latest.

When those with no children on school lunch were compared with those of one or more children on school lunch the latter group had an

increase of 0.4 food groups named while the former had 0.5 increase in the average number food groups named.

III. HOMEMAKERS' KNOWLEDGE OF FOODS NEEDED TO KEEP HEALTHY
AND KINDS OF FOOD ASSISTANCE RECEIVED
BY THEIR FAMILIES

USDA Food Program Available

Table XIII shows the percent of homemakers on USDA food programs who named each of the basic four food groups when first and latest food recalls were taken. There were 60 on the donated food program and 337 on food stamp program.

Milk group. For the milk group on the first food recall there was no significant relation between homemakers who named milk as one of the food groups needed to keep healthy and USDA food program. However, a higher percent of those on food stamp (77 percent) named milk when first entered the program as compared to those on donated food (70 percent). On the latest recall there was no significant relation between homemakers who named milk and USDA food program. However, a higher percent of those on donated food (97 percent) named milk as compared to those on food stamp (91 percent).

Increase in knowledge of milk from first to latest food recall was greater among those on donated food (27 percent) than among those on food stamp (14 percent).

TABLE XIII
FOOD KNOWLEDGE OF HOMEMAKERS IN FOUR FOOD GROUPS
BY USDA FOOD PROGRAM AVAILABLE

Food Group Named	USDA Food Program Available					
	Donated Food (N=60)			Food Stamp (N=337)		
	First	Latest	Change	First	Latest	Change
	-----Homemakers Per 100-----					
Milk	70	97	27	77	91	14
Meat	77	93	11	86	94	8
Fruit/Vegetables ^a	82	93	11	91	96	5
Bread/Cereals	63	85	22	67	86	19
All four food groups	48	82	34	51	76	25
Mean No. Named	2.9	3.7	0.8	3.2	3.7	0.5

^aFirst recall, χ^2 value achieved at least the .05 probability level.

Meat group. For the meat group on the first food recall there was no significant relation between the homemaker who named meat as one of the food groups needed to keep healthy and the USDA food program in which they participated. However, a higher percent of those on food stamp (86 percent) named meat as compared to those on donated food (77 percent). On the latest food recall, there was no significant relation between homemakers who named meat and USDA food program. However, a slightly higher percent of those on food stamp (94 percent) as compared with those on donated food (93 percent) named meat.

Increase in knowledge of meat from first to latest food recall was greater among those on donated food (11 percent) than among those on food stamp (8 percent).

Fruit/vegetables group. For the fruit/vegetables group on the first food recall there was a significant relation between the homemaker who named fruit/vegetables as one of the food groups needed to keep healthy and USDA food program. A higher percent of those on food stamp (91 percent) named fruit/vegetables as compared to those on donated food (82 percent). On the latest food recall, there was no significant relation between homemakers who named fruit/vegetables and USDA food program. However, a higher percent of homemakers on food stamp (96 percent) named fruit/vegetables as compared to those on donated food (93 percent).

Increase in knowledge of fruit/vegetables from first to latest recall was greater among those on donated food (11 percent) than among those on food stamp (5 percent).

Bread/cereals group. For the bread/cereals group on the first food recall there was no significant relation between the homemaker who named bread/cereals as one of the food groups needed to keep healthy and USDA food program. However, a higher percent of those on food stamp (67 percent) named bread/cereals as compared to those on donated food (63 percent). On the latest food recall there was no significant relation between homemakers who named bread/cereals and USDA food program. An almost equal percent (85 and 86 percent) of those on both programs named bread/cereals.

Increase in knowledge of bread/cereals from first to latest food recall was greater among those on donated food (22 percent) than among those on food stamp (19 percent).

All four food groups. For the four food groups on the first food recall there was no significant relation between homemakers who named all four food groups as needed to keep healthy and USDA food program. However, a higher percent of those on food stamp (51 percent) named the four food groups as compared to those on donated food (48 percent). On the latest food recall there was no significant relation between homemakers who named all four food groups and USDA food program. However, a higher percent of those on donated food (82 percent) named all four food groups as compared to those on food stamp (76 percent).

Increase in knowledge of all four food groups from first to latest food recall was greater among those on donated food (34 percent) than among those on food stamp (25 percent).

Homemakers on donated food named an average of 2.9 of the four food groups as needed to keep healthy on the first food recall and 3.7 on the latest recall. Homemakers on food stamp named an average of 3.2 of the four food groups as needed to keep healthy on the first food recall and 3.7 on the latest recall.

When those on donated food were compared with those on food stamp the latter group had an increase of 0.5 food groups named while the former has 0.8 increase in the average number food groups named.

Where Most Food Purchased

Table XIV shows the percent of homemakers purchasing food at a super market and at other places who named each of the basic four food groups when first and latest food recalls were taken. There were 221 who purchase food at a super market and 176 purchase food from other stores.

Milk group. For the milk group on the first food recall there was a significant relation between homemakers who named milk as one of the food groups needed to keep healthy and where food was bought. A higher percent of those who bought food at a super market (80 percent) named milk when first entered the program as compared to those who bought from other food stores (71 percent). On the latest food recall there was no significant relation between homemakers who named milk and where food was bought. However, a higher percent of those who bought from a super market (93 percent) named milk as compared to those who bought from other food stores (91 percent).

TABLE XIV
FOOD KNOWLEDGE OF HOMEMAKERS IN FOUR FOOD GROUPS
BY WHERE MOST PURCHASED

Food Group Named	Where Most Food Purchased					
	Super Market (N=221)			Other (N=176)		
	First	Latest	Change	First	Latest	Change
	-----Homemakers Per 100-----					
Milk ^a	80	93	3	71	91	20
Meat ^a	88	94	6	80	93	13
Fruit/Vegetables ^a	94	96	2	85	95	10
Bread/Cereals	69	85	16	63	86	23
All four food groups ^a	56	78	22	44	74	30
Mean No. Named	3.3	3.7	0.4	2.9	3.6	0.7

^aFirst recall, χ^2 value achieved at least the .05 probability level.

Increase in knowledge of milk from first to latest food recall was greater among those who bought food from other food stores (20 percent) than among those who purchased from super markets (3 percent).

Meat group. For the meat group on first food recall there was a significant relation between the homemaker who named meat as one of the food groups needed to keep healthy and where food was bought. A slightly higher percent who bought food at a super market (88 percent) named meat as compared to those who bought from other food stores. On the latest food recall, there was no significant relation between homemakers who named meat and where food was bought. However, an almost equal percent (93-94 percent) named meat in each of the food stores groups.

Increase in knowledge of meat from first to latest food recall was greater among those who bought from other food stores (13 percent) than among those who bought from super markets (6 percent).

Fruit/vegetables group. For the fruit/vegetables group on the first food recall there was a significant relation between the homemaker who named fruit/vegetables as one of the food groups needed to keep healthy and where most food was bought. A higher percent who bought food at a super market (94 percent) named fruit/vegetables as compared to those who bought from other food stores (85 percent). On the latest food recall there was no significant relation between homemakers who named fruit/vegetables and where food was bought. An almost equal percent (95 and 96 percent) named fruit/vegetables in each of the purchase groups.

Increase in knowledge of fruit/vegetables from first to latest food recall was greater among those who purchase from other food stores (10 percent) than among those who purchase at super markets (2 percent).

Bread/cereals group. For the bread/cereals group on the first food recall there was no significant relation between the homemaker who named bread/cereals as one of the food needed to keep healthy and where most food was bought. However, a higher percent who bought food from a super market (69 percent) named bread/cereals as compared to those who bought from other food stores (63 percent). On the latest food recall there was no significant relation between homemakers who named bread/cereals and where food was bought. However, an almost equal percent (85 and 86 percent) named bread/cereals in each purchase group.

Increase in knowledge of bread/cereals from first to latest food recall was greater among those who purchase from other food stores (23 percent) than among those who purchase from super markets (16 percent).

All four food groups. For the four food groups on the first food recall there was a significant relation between homemakers who named all four food groups as needed to keep healthy and where food was bought. A higher percent who bought food from a super market (56 percent) named the four food groups as compared to those who bought from other food stores (44 percent). On the latest food recall there was no significant relation between homemakers who named all four food groups where food was bought. However, a higher percent of those bought from super market

(78 percent) named all four food groups as compared to those who bought from other stores (74 percent).

Increase in knowledge of all four food groups from first to latest recall was greater among those who bought from other stores (30 percent) than among those who bought from super markets (22 percent).

Homemakers who purchase food from a super market named an average of 3.3 of the four food groups as needed to keep healthy on the first food recall and 3.7 on the latest food recall. Homemakers who purchase food from other food stores named an average of 2.9 of the four food groups as needed to keep healthy on the first food recall and 3.6 on the latest food recall.

When those who purchase food from other stores were compared with those who purchase from super markets the latter group had an increase of 0.7 food groups named while the former had 0.4 increase in the average number food groups named.

Family Monthly Income

Table XV shows the percent of homemakers in various income levels who named each of the basic four food groups when the first and latest recalls were taken. There were 140 homemakers in \$0-150 income, 133 homemakers in \$151-250 income and 124 homemakers in \$251 and over income groups.

Milk group. For the milk group on the first food recall there was a significant relation between the homemakers who named milk as one of the food groups needed to keep healthy and monthly income. A higher

TABLE XV
FOOD KNOWLEDGE OF HOMEMAKERS IN FOUR FOOD GROUPS BY FAMILY MONTHLY INCOME

Food Group Named	Family Monthly Income								
	\$0-150 (N=140)		\$151-250 (N=133)		\$251-Over (N=124)		Change		
	First	Latest	First	Latest	First	Latest			
	-----Homemakers Per 100-----								
Milk ^a	72	89	17	72	92	20	84	95	11
Meat ^b	80	92	12	84	91	7	89	98	9
Fruit/Vegetables ^a	85	95	10	90	93	3	95	98	3
Bread/Cereals ^a	59	83	24	64	86	22	77	88	11
All four food groups ^a	43	72	29	49	76	27	62	82	20
Mean No. Named	3.0	3.6	0.6	3.1	3.6	0.5	3.5	3.8	0.3

^aFirst recall, χ^2 value achieved at least the .05 probability level.

^bLatest recall, χ^2 value achieved at least the .05 probability level.

percent of those with \$251 and over income (84 percent) named milk as compared to those in the \$0-150 and \$151-250 income groups (72 percent, respectively). On the latest food recall there was no significant relation between homemakers who named milk and monthly income. However, a higher percent of those with \$251 and over income (95 percent) named milk as compared to those with \$151-250 income (92 percent) or the \$0-150 income group (89 percent).

Increase in knowledge of milk from first to latest recall was greater among those with \$151-250 income (20 percent) than among those with \$0-150 income (17 percent) or the \$251 and over income (11 percent).

Meat group. For the meat group on the first food recall there was no significant relation between the homemakers who named meat as one of the food groups needed to keep healthy and monthly income. However, a higher percent of those with \$251 and over income (89 percent) named meat as compared to those with \$151-250 income (84 percent) or the \$0-150 income group (80 percent). On the latest food recall food recall there was a significant relation between homemakers who named meat and monthly income. A higher percent of those with \$251 and over income (98 percent) named meat as compared with \$0-150 income (92 percent) or the \$151-250 income (91 percent).

Increase in knowledge of meat from first to latest food recall was greater among those with \$0-150 income (12 percent) than among those with \$251 and over income (9 percent) or those with \$151-250 income (7 percent).

Fruit/vegetables group. For the fruit/vegetables group on the first food recall there was a significant relation between the homemakers who named fruit/vegetables as one of the food groups needed to keep healthy and monthly income. A higher percent of those with \$251 and over income (95 percent) named fruit/vegetables as compared to those with \$151-250 income (90 percent) or those with \$0-150 income (85 percent). On the latest food recall, there was no significant relation between homemakers who named fruit/vegetables and monthly income. A higher percent of those with \$251 and over (98 percent) named fruit/vegetables as compared to \$0-150 income (95 percent) or those with \$151-250 income (93 percent).

Increase in knowledge of fruit/vegetables from first to latest food recall was greater among those with \$0-150 income (10 percent) than among those with \$151-250 and \$251 and over income (3 percent).

Bread/cereals group. For the bread/cereals group on the first food recall there was a significant relation between the homemakers who named bread/cereals as one of the food groups needed to keep healthy and monthly income. A higher percent of those with \$251 and over income (77 percent) named bread/cereals as compared to \$151-250 income (64 percent) or those with \$0-150 income (59 percent). On the latest food recall there was no significant relation between homemakers who named bread/cereals and monthly income. However, a higher percent of those with \$251 and over income (88 percent) named bread/cereals as compared to \$151-250 income (86 percent) or those with \$0-150 income (83 percent).

Increase in knowledge of bread/cereals from first to latest food recall was greater among those with \$0-150 income (24 percent) than among those with \$151-250 income (22 percent) or those with \$251 and over income (11 percent).

All four food groups. For the four food groups on the first food recall there was a significant relation between homemakers who named all four food groups as needed to keep healthy and monthly income. A higher percent of those with \$251 and over (62 percent) named all four food groups as compared to those with \$151-250 income (49 percent) or the \$0-150 income group (43 percent). On the latest food recall there was no significant relation between homemakers who named all four food groups and monthly income. However, a higher percent of those with \$251 and over income (86 percent) of the four food groups as compared to those with \$151-250 income (76 percent) or the \$0-150 income (72 percent).

Increase in knowledge of all four food groups from first to latest food recall was greater among the \$0-150 income (29 percent) than among those with \$151-250 income (27 percent) or the \$251 and over income (20 percent).

Homemakers with \$0-150 income named an average of 3.0 of the four food groups as needed to keep healthy on the first food recall and 3.6 on the latest food recall. Homemakers with \$151-250 income named an average of 3.1 of the four food groups as needed to keep healthy on the first food recall and 3.6 on the latest food recall.

When those with \$0-150 income were compared with those of \$151-250 income the latter group had an increase of 0.5 food groups named while the former had 0.6 increase in the average number food groups named.

Family Monthly Food Cost

Table XVI shows the percent of homemakers spending below and those spending above the mean dollars monthly for food who named each of the basic four food groups when the first and latest food recalls were taken. There were 214 under mean \$58 and 183 over mean \$58.

Milk group. For the milk group on the first food recall there was a significant relation between the homemakers who named milk as one of the food groups needed to keep healthy and food cost. A higher percent of those over mean \$58 (82 percent) named milk when first entered the program as compared to those under mean \$58 (71 percent). On the latest food recall there was no significant relation between homemakers who named milk and food cost. However, a higher percent of those over mean \$58 (93 percent) named milk as compared to those under mean \$58 (91 percent).

Increase in knowledge of milk from first to latest food recall was greater among those under mean \$58 (20 percent) than among those over mean \$58 (11 percent).

Meat group. For the meat group on the first food recall there was a significant relation between the homemakers who named meat as one of the food groups needed to keep healthy and food cost. A higher percent of those with over mean \$58 (89 percent) named meat as compared to those

TABLE XVI
FOOD KNOWLEDGE OF HOMEMAKERS IN FOUR FOOD GROUPS
BY MONTHLY FAMILY FOOD COST

Food Group Named	Family Monthly Food Cost					
	Under Mean \$58 (N=214)			Over Mean \$58 (N=183)		
	First	Latest	Change	First	Latest	Change
	-----Homemakers Per 100-----					
Milk ^a	71	91	20	82	93	11
Meat ^{a,b}	80	91	11	89	96	7
Fruit/Vegetables ^{a,b}	86	94	8	95	98	3
Bread/Cereals ^a	61	86	25	73	85	12
All four food groups ^a	44	75	31	59	78	19
Mean No. Named	3.0	3.6	0.6	3.4	3.7	0.3

^aFirst recall, χ^2 value achieved at least the .05 probability level.

^bLatest recall, χ^2 value achieved at least the .05 probability level.

under mean \$58 (80 percent). On the latest food recall, there was a significant relation between homemakers who named meat and food cost. A higher percent of those over mean \$58 (96 percent) named meat as compared to those under mean \$58 (91 percent).

Increase in knowledge of meat from first to latest food recall was greater among those under mean \$58 (20 percent) than among those over mean \$58 (11 percent).

Fruit/vegetables group. For the fruit/vegetables group on the first food recall there was a significant relation between the homemakers who named fruit/vegetables as one of the food groups needed to keep healthy and food cost. A higher percent of those over mean \$58 (95 percent) named fruit/vegetables as compared to those under mean \$58 (86 percent). On the latest food recall, there was a significant relation between homemakers who named fruit/vegetables and food cost. A higher percent of those over mean \$58 (98 percent) named fruit/vegetables as compared to those under mean \$58 (94 percent).

Increase in knowledge of fruit/vegetables from first to latest food recall was greater among those under mean \$58 (8 percent) than among those over mean \$58 (3 percent).

Bread/cereals group. For the bread/cereals group on the first food recall there was a significant relation between homemakers who named bread/cereals as one of the food groups needed to keep healthy and food cost. A higher percent of those over mean \$58 (73 percent) named bread/cereals as compared to those under mean \$58 (61 percent). On the

latest food recall there was no significant relation between homemakers who named bread/cereals and food cost. However, an almost equal percent (85-86 percent) named bread/cereals in each of the food cost groups.

Increase in knowledge of bread/cereals from first to latest food recall was greater among the under mean \$58 (25 percent) than among the over mean \$58 (12 percent).

All four food groups. For the four food groups on the first food recall there was a significant relation between homemakers who named all four food groups needed to keep healthy and food cost. A higher percent of those over mean \$58 (59 percent) named the four food groups as compared to those under mean \$58 (44 percent). On the latest food recall there was no significant relation between homemakers who named all four food groups and food cost. However, a higher percent of those over \$58 (78 percent) named all four food groups as compared to those under mean \$58 (75 percent).

Increase in knowledge of all four food groups from first to latest food recall was greater among those under mean \$58 (31 percent) than among those over mean \$58 (19 percent).

Homemakers under mean \$58 named an average of 3.0 of the four food groups as needed to keep healthy on the first food recall and 3.6 on the latest recall. Homemakers over mean \$58 named an average of 3.4 of the four food groups as needed to keep healthy on first food recall and 3.7 on the latest recall.

When those under mean \$58 were compared with those over mean \$58 the latter group had an increase of 0.3 food groups named while the former had 0.6 increase in the average number food groups named.

Percent of Monthly Family Income Spent for Food

Table XVII shows the percent of homemakers who spent varying proportions of their monthly income for food and who named each of the food groups at the first and latest recall. There were 152 homemakers who spent up to 25 percent, 169 homemakers who spent 26-40 percent and 76 who spent over 40 percent of income for food last month.

Milk group. For the milk group on second food recall there was a significant relation between the homemakers who named milk as one of the food groups needed to keep healthy and percent of income spent on food last month. A higher percent of those over 40 percent group (83 percent) named milk on second recall on the program as compared to those in the up to 25 percent group (80 percent). On the latest food recall there was a significant relation between homemakers who named milk and percent of income spent for food last month. A higher percent of those in the over 40 percent group (96 percent) named milk as compared to those in the up to 25 percent group (94 percent).

Increase in knowledge of milk from first to latest food recall was greater among those in the 26-40 percent group (19 percent) than among those in the up to 25 percent group (14 percent).

Meat group. For the meat group on the second food recall there was no significant relation between homemakers who named meat as one of the food groups needed to keep healthy and percent of income spent for food last month. However, a higher percent of those in the 26-40 percent group (85 percent) named meat as compared to those in

TABLE XVII
FOOD KNOWLEDGE OF HOMEMAKERS IN FOUR FOOD GROUPS BY PERCENT OF MONTHLY
FAMILY INCOME SPENT FOR FOOD

Food Group Named	Percent of Monthly Family Income Spent For Food									
	Up to 25 Percent (N=152)		26-40 Percent (N=169)		Over 40 Percent (N=26)					
	First	Latest	Change	First	Latest	Change	First	Latest	Change	
	-----Homemakers Per 100-----									
Milk ^{a, b}	80	94	14	69	88	19	83	96	13	
Meat	84	94	10	85	91	6	83	97	14	
Fruit/Vegetables	90	95	5	90	96	6	90	95	5	
Bread/Cereals ^b	67	92	25	68	81	13	62	83	21	
All four food groups ^b	53	83	30	49	70	21	51	79	28	
Mean No. Named	3.2	3.8	0.6	3.1	3.6	0.5	3.2	3.7	0.5	

^aFirst recall, χ^2 value achieved at least the .05 probability level.

^bLatest recall, χ^2 value achieved at least the .05 probability level.

the up to 25 percent group (84 percent). On the latest food recall there was no significant relation between homemakers who named meat and percent of income spent on food last month. However, a higher percent of those in the over 40 percent group (97 percent) named meat as compared to those in the up to 25 percent group (94 percent).

Increase in knowledge of meat from first to latest food recall was greater among those in the over 40 percent group (14 percent) than among those in the up to 25 percent group (10 percent).

Fruit/vegetables group. For the fruit/vegetables group on the second food recall there was no significant relation between the homemaker who named fruit/vegetables as one of the food groups needed to keep healthy and percent of income spent for food last month. However, an equal percent (90 percent) of the homemakers in each of the percent income spent for food last month groups named fruit/vegetables. On the latest food recall there was no significant relation between homemakers who named fruit/vegetables and percent of income spent for food last month. However, a higher percent of those in the 26-40 percent group (96 percent) named fruit/vegetables compared to those in the up to 25 percent and over 40 percent group (95 percent).

Increase in knowledge of fruit/vegetables from first to latest was greater among those in the 26-40 percent group (6 percent) than among those of up to 25 percent and over 40 percent (5 percent).

Bread/cereals group. For the bread/cereals group on the second food recall there was no significant relation between the homemakers

who named bread/cereals as one of the food groups needed to keep healthy and percent of income spent for food last month. However, a higher percent of those in the 26-40 percent group (68 percent) named bread/cereals as compared to those in the up to 25 percent group (67 percent). On the latest food recall there was a significant relation between homemakers who named bread/cereals as one of the food groups needed to keep healthy and percent of income spent for food last month. A higher percent of those in the up to 25 percent group (92 percent) named bread/cereals as compared to those in the over 40 percent group (83 percent).

Increase in knowledge of bread/cereals from first to latest food recall was greater among those in up to 25 percent (25 percent) than among those in over 40 percent group (21 percent).

All four food groups. For the four food groups on second food recall there was no significant relation between homemakers who named all four food groups as needed to keep healthy and percent of income spent for food last month. However, a higher percent of those in the 26-40 percent group (68 percent) named all four food groups as compared to those with up to 25 percent group (67 percent). On the latest food recall there was a significant relation between homemakers who named all four food groups as needed to keep healthy and percent of income spent for food last month. A higher percent of those in the up to 25 percent group (83 percent) named all four food groups as compared to those in the over 40 percent group (79 percent).

Increase in knowledge of all four food groups from first to latest food recall was greater among those in the up to 25 percent group (30 percent) than among those in the over 40 percent group (28 percent).

Homemakers in the up to 25 percent group named an average of 3.2 of the four food groups as needed to keep healthy on the first food recall and 3.8 on the latest recall. Homemakers in the 26-40 percent group named an average of 3.1 of the four food groups as needed to keep healthy on the first food recall and 3.6 on the latest recall. Homemakers in the over 40 percent group named an average of 3.2 of the four food groups as needed to keep healthy on the first food recall and 3.7 on the latest recall.

When those in the under 25 percent were compared with those in both the 26-40 percent and over 40 percent group the latter group had an increase of 0.5 food groups named while the two former groups had 0.6 increase in the average number of food groups named.

Servings of Milk

Table XVIII shows the percent of homemakers having adequate and those having inadequate servings of milk who named each of the basic four food groups when first and latest food recalls were taken. There were 280 homemakers with inadequate servings of milk and 117 homemakers with adequate servings of milk.

Milk group. For the milk group on the first food recall there was a significant relation between homemakers who named milk as one of the food groups needed to keep healthy and servings of milk. A higher

TABLE XVIII
FOOD KNOWLEDGE OF HOMEMAKERS IN FOUR FOOD GROUPS
BY SERVINGS OF MILK

Food Group Named	Servings of Milk					
	Inadequate (N=280)			Adequate (N=117)		
	First	Latest	Change	First	Latest	Change
	-----Homemakers Per 100-----					
Milk ^a	73	93	20	84	90	6
Meat	86	94	8	80	92	12
Fruit/Vegetables	89	95	6	92	97	5
Bread/Cereals	64	85	21	71	86	15
All four food groups ^a	47	76	29	60	77	17
Mean No. Named	3.1	3.7	0.6	3.3	3.6	0.3

^aFirst recall, χ^2 value achieved at least the .05 probability level.



percent of those with adequate servings of milk (84 percent) named milk when first entered the program as compared to those with inadequate servings of milk (73 percent). On the latest food recall there was no significant relation between homemakers who named milk and servings of milk. However, a higher percent of those with inadequate servings of milk (93 percent) named milk as compared to those with adequate servings of milk (90 percent).

Increase in knowledge of milk from first to latest food recall was greater among those with inadequate servings of milk (20 percent) than among those with adequate servings of milk (6 percent).

Meat group. For the meat group on the first food recall there was no significant relation between homemakers who named meat as one of the food groups needed to keep healthy and servings of milk. However, a higher percent of those in the inadequate servings of milk (86 percent) named meat as compared to those with adequate serving of milk (80 percent). On the latest food recall there was no significant relation between homemakers who named meat and servings of milk. However, a higher percent of those with adequate servings of milk (97 percent) named meat as compared to those with inadequate servings of milk (95 percent).

Increase in knowledge of meat from first to latest food recall was greater among those in the adequate servings of milk (12 percent) than among those in the inadequate servings of milk (8 percent).

Fruit/vegetables group. For the fruit/vegetables group on the first food recall there was no significant relation between homemakers who named fruit/vegetables as one of the food groups needed to keep healthy and servings of milk. However, a higher percent of those with adequate servings of milk (92 percent) named fruit/vegetables as compared to those with inadequate servings of milk (89 percent). On the latest food recall there was no significant relation between homemakers who named fruit/vegetables and serving of milk. However, a higher percent of those with adequate servings of milk (97 percent) named fruit/vegetables as compared to those with inadequate servings of milk (95 percent).

Increase in knowledge of fruit/vegetables from first to latest food recall was greater among those with inadequate servings of milk (6 percent) than among those with adequate servings of milk (5 percent).

Bread/cereals group. For the bread/cereals group on the first food recall there was no significant relation between the homemakers who named bread/cereals as one of the food groups needed to keep healthy and servings of milk. However, a higher percent of those with adequate servings of milk (71 percent) named bread/cereals as compared to those with inadequate servings of milk (64 percent). On the latest food recall there was no significant relation between homemakers who named bread/cereals and servings of milk. However, a higher percent of those with adequate servings of milk (86 percent) named bread/cereals as compared to those with inadequate servings of milk (85 percent).

Increase in knowledge of bread/cereals from first to latest food recall was greater among those with inadequate servings of milk (21 percent) than among those of adequate servings of milk (15 percent).

All four food groups. For the four food groups on the first food recall there was a significant relation between homemakers who named all four food groups as needed to keep healthy and servings of milk. A higher percent of those with adequate servings of milk (60 percent) named the four food groups as compared to those with inadequate servings of milk (47 percent). On the latest food recall there was no significant relation between homemakers who named all four food groups and servings of milk. However, a higher percent of those with adequate servings of milk (77 percent) named all four food groups as compared to those with inadequate servings of milk (76 percent).

Increase in knowledge of all four food groups from first to latest food recall was greater among those with inadequate servings of milk than among those of adequate servings of milk (17 percent).

Homemakers with inadequate servings of milk named an average of 3.1 of the four food groups as needed to keep healthy on the first food recall and 3.7 on the latest recall. Homemakers with adequate servings of milk named an average of 3.3 of the four food groups as needed to keep healthy on the first food recall and 3.6 on the latest recall.

When those with inadequate servings of milk were compared with those of adequate servings of milk the former group had an increase of

0.6 food groups named while the latter had 0.3 increase in the average number food groups named.

Servings of Bread

Table XIX shows the percent of homemakers having adequate and those having inadequate servings of bread who named each of the basic four food groups when first and latest food recalls were taken. There were 226 homemakers with inadequate servings of bread and 171 homemakers with adequate servings of bread.

Milk group. For the milk group on the first food recall there was no significant relation between homemakers who named milk as one of the food groups needed to keep healthy and servings of bread. However, a higher percent of those with inadequate servings of bread (76 percent) named milk when first entered the program as compared to those with adequate servings of bread (75 percent). On the latest food recall there was no significant relation between homemakers who named milk and servings of bread. However, an equal percent (92 percent) of both inadequate and adequate servings of bread groups named milk.

Increase in knowledge of milk from first to latest food recall was greater among those with adequate servings of bread (17 percent) than among those with inadequate servings of bread (16 percent).

Meat group. For the meat group on the first food recall there was no significant relation between homemakers who named meat as one of the food groups needed to keep healthy and servings of bread. However, a

TABLE XIX
FOOD KNOWLEDGE OF HOMEMAKERS IN FOUR FOOD GROUPS
BY SERVINGS OF BREAD

Food Group Named	Servings of Bread					
	Inadequate (N=226)			Adequate (N=171)		
	First	Latest	Change	First	Latest	Change
	-----Homemakers Per 100-----					
Milk	76	92	16	75	92	17
Meat	85	95	10	83	91	8
Fruit/Vegetables ^b	91	97	6	89	93	4
Bread/Cereals	67	87	20	65	83	18
All four food groups	54	79	25	46	73	27
Mean No. Named	3.2	3.7	0.5	3.1	3.6	0.5

^bLatest recall, χ^2 value achieved at least the .05 probability level.

higher percent of those with inadequate servings of bread (85 percent) named meat as compared with those of adequate servings of bread (83 percent). On the latest food recall there was no significant relation between homemakers who named meat and servings of bread. However, a higher percent of those with inadequate servings of bread (95 percent) named meat as compared to those with adequate servings of bread (91 percent).

Increase in knowledge of meat from first to latest food recall was greater among those with inadequate servings of bread (10 percent) than among those of adequate servings of bread (8 percent).

Fruit/vegetables group. For the fruit/vegetables group on the first food recall there was no significant relation between homemakers who named fruit/vegetables as one of the food groups needed to keep healthy and servings of bread. However, a higher percent of those with inadequate servings of bread (91 percent) named fruit/vegetables as compared to those with adequate servings of bread (89 percent). On the latest food recall there was a significant relation between homemakers who named fruit/vegetables and servings of bread. However, a higher percent of those with inadequate servings of bread (87 percent) named fruit/vegetables as compared to those with adequate servings of bread (83 percent).

Increase in knowledge of fruit/vegetables from first to latest food recall was greater among those with inadequate servings of bread (6 percent) than among those with adequate servings of break (4 percent).

Bread/cereals group. For the bread/cereals group on the first food recall there was no significant relation between homemakers who named bread/cereals as one of the food groups needed to keep healthy and servings of bread. However, a higher percent of those with inadequate servings (67 percent) named bread/cereals as compared to those with adequate servings of bread (65 percent). On the latest food recall there was no significant relation between homemakers who named bread/cereals and servings of bread. However, a higher percent of those with inadequate servings of bread (87 percent) named bread/cereals as compared to those with adequate servings of bread (83 percent).

Increase in knowledge of bread/cereals from first to latest food recall was greater among those with inadequate servings of bread (20 percent) than among those with adequate servings of bread (18 percent).

All four food groups. For the four food groups on the first food recall there was no significant relation between homemakers who named all four food groups as needed to keep healthy and servings of bread. However, a higher percent of those with inadequate servings of bread (54 percent) named the four food groups as compared to those with adequate servings of bread (65 percent). On the latest food recall there was no significant relation between homemakers who named all four food groups and servings of bread. However, a higher percent of those with inadequate servings of bread (79 percent) named all four food groups as compared to those with adequate servings of bread (73 percent).

Increase in knowledge of all four food groups from first to latest food recall was greater among those with adequate servings of bread (27 percent) than among those with inadequate servings of bread (25 percent).

Homemakers with inadequate servings of bread named an average of 3.2 of the four food groups as needed to keep healthy on the first food recall and 3.7 on the latest recall. Homemakers with adequate servings of bread named an average of 3.1 of the four food groups as needed to keep healthy on the first food recall and 3.6 on the latest recall.

When those with inadequate servings of bread were compared with those of adequate servings of bread each group had an increase of 0.5 food groups named.

Servings of Meat

Table XX shows the percent of homemakers and servings of meat who named each of the basic four food groups when first and latest food recalls were taken. There were 89 homemakers with inadequate servings of meat and 308 homemakers with adequate servings of meat.

Milk group. For the milk group on the first food recall there was no significant relation between homemakers who named milk as one of the food groups needed to keep healthy and servings of meat. However, a higher percent of those with inadequate servings of meat (80 percent) named milk when second recall was taken as compared to those with adequate servings of meat (75 percent). On the latest food recall there

TABLE XX
FOOD KNOWLEDGE OF HOMEMAKERS IN FOUR FOOD GROUPS
BY SERVINGS OF MEAT

Food Group Named	Servings of Meat					
	Inadequate (N=89)			Adequate (N=308)		
	First	Latest	Change	First	Latest	Change
	-----Homemakers Per 100-----					
Milk ^b	80	87	7	75	94	19
Meat ^b	79	88	9	86	95	9
Fruit/Vegetables ^b	88	91	3	91	97	6
Bread/Cereals	66	87	21	66	85	19
All four food groups	51	73	22	51	78	27
Mean No. Named	3.1	3.5	0.4	3.2	3.7	0.5

^bLatest recall, χ^2 value achieved at least the .05 probability level.

was a significant relation between homemakers who named milk and servings of meat. A higher percent of those with adequate servings of meat (95 percent) named milk on second food recall as compared to those with inadequate servings of meat (88 percent).

Increase in knowledge of milk from first to latest food recall was greater among those with adequate servings of meat (19 percent) than among those with inadequate servings of meat (7 percent).

Meat group. For the meat group on the first food recall there was no significant relation between homemakers who named meat as one of the food groups needed to keep healthy and servings of meat. However, a higher percent of those in the adequate servings of meat (86 percent) named meat as compared to those with inadequate servings of meat (79 percent). On the latest food recall there was a significant relation between homemakers who named meat and servings of meat. A higher percent of those in the adequate servings of meat (95 percent) named meat as compared to those with inadequate servings of meat (88 percent).

Increase in knowledge of meat from first to latest food recall was of equal percent (9 percent) for each of the servings of meat group.

Fruit/vegetables group. For the fruit/vegetables group on the first food recall there was no significant relation between homemakers who named fruit/vegetables as one of the foods to keep healthy and servings of meat. However, a higher percent of those with adequate servings of meat (91 percent) named fruit/vegetables as compared to

those with inadequate servings of meat (88 percent). On the latest food recall there was a significant relation between homemakers who named fruit/vegetables and servings of meat. A higher percent of those with adequate servings of meat (97 percent) named fruit/vegetables as compared to those with inadequate servings of meat (91 percent).

Increase in knowledge of fruit/vegetables from first to latest food recall was greater among those of adequate servings of meat (6 percent) than among those with inadequate servings of meat (3 percent).

Bread/cereals group. For the bread/cereals group on first food recall there was no significant relation between homemakers who named bread/cereals and servings of meat. However, an equal percent (66 percent) named bread/cereals in each of servings of meat groups. On the latest food recall there was a significant relation between homemakers who named bread/ cereals and servings of meat. A higher percent of those with inadequate servings of meat (87 percent) named bread/cereals as compared to those with adequate servings of meat (85 percent).

Increase in knowledge of bread/cereals from first to latest recall was greater among those with inadequate servings of meat (21 percent) than among those with adequate servings of meat (19 percent).

All four food groups. For the four food groups on the first food recall there was no significant relation between homemakers who named all four food groups as needed to keep healthy and servings of meat. However, an equal percent (51 percent) named all four food groups in

each of the servings of meat groups. On the latest food recall there was no significant relation between homemakers who named all four food groups and servings of meat. However, a higher percent of those with adequate servings of meat (78 percent) named all four food groups as compared to those with inadequate servings of meat (73 percent).

Increase in knowledge of all four food groups from first to latest food recall was greater among those with adequate servings of meat (27 percent) than among those with inadequate servings of meat (22 percent).

Homemakers with inadequate servings of meat named an average of 3.1 of the four food groups as needed to keep healthy on the first recall and 3.5 on the latest recall. Homemakers with adequate servings of meat named an average of 3.2 of the four food groups as needed to keep healthy on the first recall and 3.7 on the latest recall.

When those with inadequate servings of meat were compared with those with adequate servings of meat the latter had an increase of 0.4 food groups named while the former had an 0.5 increase in average number of food groups named.

Servings of Vegetables

Table XXI shows the percent of homemakers and servings of vegetables on second recall who named each of the basic four food groups when first and latest food recall were taken. There were 236 homemakers with inadequate servings of vegetables and 161 homemakers with adequate servings of vegetables.

TABLE XXI
FOOD KNOWLEDGE OF HOMEMAKERS IN FOUR FOOD GROUPS
BY SERVINGS OF VEGETABLES

Food Group Named	Servings of Vegetables					
	Inadequate (N=236)			Adequate (N=161)		
	First	Latest	Change	First	Latest	Change
	-----Homemakers Per 100-----					
Milk ^{a,b}	73	87	14	81	97	16
Meat	84	92	8	84	95	11
Fruit/Vegetables	89	94	5	91	96	5
Bread/Cereals	64	84	20	70	88	18
All four food groups ^b	48	73	25	56	83	27
Mean No. Named	3.1	3.6	0.5	3.3	3.8	0.5

^aFirst recall, χ^2 value achieved at least the .05 probability level.

^bLatest recall, χ^2 value achieved at least the .05 probability level.

Milk group. For the milk group on the first food recall there was a significant relation between homemakers who named milk as one of the food groups needed to keep healthy and servings of vegetables. A higher percent of those with adequate servings of vegetables (81 percent) named milk as compared to those with inadequate servings of vegetables (73 percent). On the latest food recall there was a significant relation between homemakers who named milk on second food recall and servings of vegetables. A higher percent of those with inadequate servings of vegetables (97 percent) named milk as compared to those with adequate servings of vegetables (87 percent).

Increase in knowledge of milk from first to latest food recall was greater among those with adequate servings of vegetables (16 percent) than among those with inadequate servings of vegetables (14 percent).

Meat group. For the meat group on the first food recall there was no significant relation between homemakers who named meat as one of the food groups needed to keep healthy and servings of vegetables. However, an equal percent (84 percent) named meat in each of the servings of vegetables groups. On the latest food recall there was no significant relation between homemakers who named meat and servings of vegetables. However, a higher percent of those in the adequate servings of vegetables (95 percent) named meat on second food recall as compared to those with inadequate servings of vegetables (92 percent).

Increase in knowledge of meat from first to latest food recall was greater among those in the adequate servings of vegetables (11 percent) than among those with inadequate servings of vegetables (8 percent).

Fruit/vegetables group. For the fruit/vegetables group on the first food recall there was no significant relation between homemakers who named fruit/vegetables as one of the food groups needed to keep healthy and servings of vegetables. However, a higher percent of those with adequate servings of vegetables (91 percent) named fruit/vegetables as compared to those with inadequate servings of vegetables (89 percent). On the latest food recall there was no significant relation between homemakers who named fruit/vegetables and servings of vegetables. However, a higher percent of those with adequate servings of vegetables (96 percent) named fruit/vegetables as compared to those with inadequate servings of vegetables (94 percent).

Increase in knowledge of fruit/vegetables from first to latest food recall was an equal percent (5 percent) in each of servings of vegetables group.

Bread/cereals group. For the bread/cereals group on the first food recall there was no significant relation between homemakers who named bread/cereals as one of the food groups needed to keep healthy and servings of vegetables. However, a higher percent of those with adequate servings of vegetables (91 percent) named bread/cereals as compared to those with inadequate servings of vegetables (89 percent). On the latest food recall there was no significant relation between homemakers who named bread/cereals and servings of vegetables. However, a higher percent of those with adequate servings of vegetables (88 percent) named bread/cereals as compared to those with inadequate servings of vegetables (84 percent).

Increase in knowledge of bread/cereals from first to latest food recall was greater among those with inadequate servings of vegetables (20 percent) than among those with adequate servings of vegetables (18 percent).

All four food groups. For the four food groups on the first food recall there was no significant relation between homemakers who named all four food groups and servings of vegetables. However, a higher percent of those with adequate servings of vegetables (56 percent) named all four food groups as compared to those with inadequate servings of vegetables (48 percent). On the latest food recall there was a significant relation between homemakers who named all four food groups and servings of vegetables. A higher percent of those with adequate servings of vegetables (83 percent) named all four food groups as compared to those with inadequate servings of vegetables (73 percent).

Increase in knowledge of all four food groups from first to latest food recall was greater among those with adequate servings of vegetables (27 percent) than among those with inadequate servings of vegetables (25 percent).

Homemakers with inadequate servings of vegetables named an average of 3.1 of the four food groups as needed to keep healthy on the first food recall and 3.6 on the latest food recall. Homemakers with adequate servings of vegetables named an average of 3.3 of the four food groups as needed to keep healthy on the first food recall and 3.8 on the latest food recall.

When the two groups of servings of vegetables were compared each group had an increase of 0.5 for the average number food groups named.

Adequacy of Diet Score

Table XXII shows the percent of homemakers and adequacy in diet score who named each of the basic four food groups when first and latest food recall were taken. There were 71 homemakers in the 0-7 low adequacy in diet score, 139 homemakers in the 8-10 medium adequacy in diet score and 187 homemakers in the 11 and over adequacy in diet score groups.

Milk group. For the milk group on the first food recall there was no significant relation between homemakers who named milk as one of the food groups needed to keep healthy and adequacy in diet score. However, an almost equal percent (76-77 percent) named milk in each of the 8-10 medium and 11 and over high adequacy in diet score on second food recall as compared to those in the 0-7 low adequacy in diet score group (73 percent). On the latest food recall there was a significant relation between homemakers who named milk as one of the food groups needed to keep healthy and adequacy in diet score recall. A higher percent of those in the 11 and over high adequacy in diet score recall group (96 percent) named milk as compared to those in the 8-10 medium adequacy in diet score recall (89 percent).

Increase in knowledge of milk from first to latest food recall was greater among those in the 11 and over high adequacy in diet score recall group (19 percent) than among those in either of the 0-7 low or 8-10 medium adequacy in diet score groups (13 percent).

TABLE XXII
FOOD KNOWLEDGE OF HOMEMAKERS IN FOUR FOOD GROUPS BY ADEQUACY OF DIET SCORE

Food Group Named	Adequacy of Diet Score								
	0-7 Low (N=71)		8-10 Medium (N=139)				11-Over High (N=187)		
	First	Latest	Change	First	Latest	Change	First	Latest	
	-----Homemakers Per 100-----								
Milk ^b	73	86	13	76	89	13	77	96	19
Meat	87	90	3	82	92	10	85	96	11
Fruit/Vegetables ^b	93	90	3	89	95	6	89	98	9
Bread/Cereals ^{a,b}	73	85	12	58	80	22	70	90	20
All four food groups ^b	54	70	16	46	68	22	54	86	32
Mean No. Named	3.3	3.5	0.2	3.0	3.5	0.5	3.2	3.8	0.6

^aFirst recall, χ^2 value achieved at least the .05 probability level.

^bLatest recall, χ^2 value achieved at least the .05 probability level.

Meat group. For the meat group on the first food recall there was no significant relation between homemakers who named meat and adequacy in diet score. However, a higher percent of these in the 0-7 low adequacy in diet score group (87 percent) named meat as compared to those in the 11 and over high adequacy in diet score group (85 percent). On the latest recall there were no significant relation between homemakers who named meat and adequacy in diet score. However, a higher percent of those in the 11 and over adequacy in diet score group (96 percent) named meat as compared to those in the 8-10 medium adequacy in diet score recall group.

Increase in knowledge of meat from first to latest food recall was greater among those with 11 and over adequacy in diet score (11 percent) than among those of the 8-10 medium adequacy in diet score group (10 percent).

Fruit/vegetables group. For the fruit/vegetables group on the first food recall there was no significant relation between homemakers who named fruit/vegetables and adequacy in diet score. However, a higher percent of those in the 0-7 low adequacy in diet score group (93 percent) named fruit/vegetables on second food recall as compared to those in each of the 8-10 medium and 11 and over high adequacy in diet score groups (89 percent). On the latest food recall there was a significant relation between homemakers who named fruit/vegetables and adequacy in diet score recall. A higher percent of those in the 11 and over high adequacy in diet score group (98 percent) named fruit/vegetables on second food recall as compared to those in the 8-10 medium adequacy in diet score group (95 percent).

Increase in knowledge of fruit/vegetables from first to latest food recall was greater among those in the 11 and over high adequacy in diet score group (9 percent) than among those in the 8-10 medium adequacy in diet score (6 percent).

Bread/cereals group. For the bread/cereals group on the first food recall there was a significant relation between homemakers who named bread/cereals and adequacy in diet score. A higher percent of those in the 0-7 low adequacy in diet group (73 percent) named bread/cereals on second food recall as compared to those in the 11 and over high adequacy in diet score group (70 percent). On the latest food recall there was a significant relation between homemakers who named bread/cereals and adequacy in diet score. A higher percent of those with 11 and over high adequacy in diet score group (90 percent) named bread/cereals on second food recall as compared to those in the 0-7 low adequacy in diet score (85 percent).

Increase in knowledge of bread/cereals from first to latest food recall was greater among those of the 8-10 medium adequacy in diet score recall (80 percent) than among those in the 11 and over high adequacy in diet score recall (20 percent).

All four food groups. For the four food groups on the first food recall there was no significant relation between homemakers who named all four food and adequacy in diet score recall. However, an equal percent (54 percent) named all four food groups on second food recall in each of the 0-7 low, and 11 and over high adequacy in diet score

group on second food recall as compared to those in the 8-11 medium adequacy in diet score (46 percent). On the latest food recall there was a significant relation between homemakers who named all four food groups and adequacy in diet score. A higher percent of those in the 11 and over high adequacy in diet score group (86 percent) named all four food groups on second food recall as compared to those in the 0-7 low adequacy in diet score (70 percent).

Increase in knowledge of all four food groups from first to latest food recall was greater among those in the 11 and over high adequacy in diet score group (32 percent) than among those in the 8-10 medium adequacy in diet score group (22 percent).

Homemakers in the 0-7 low adequacy in diet score named an average of 3.3 of the four food groups as needed to keep healthy on the first food recall and 3.5 on the latest food recall. Homemakers in the 8-10 medium adequacy in diet score group named an average of 3.0 of the four food groups as needed to keep healthy on the first food recall and 3.5 on the latest recall. Homemakers in the 11 and over high adequacy in diet score named an average of 3.2 of the four food groups as needed to keep healthy on the first food recall and 3.8 on the latest recall.

When those in the 11 and over high adequacy in diet score recall were compared with those in the 8-10 medium adequacy in diet score the latter group had an increase of 0.6 food groups named while the former had 0.5 increase in the average number food groups named.

Increase in Diet Score

Table XXIII shows the percent of homemakers and increase in diet score who named each of the basic food groups when first and latest food recalls were taken. There were 98 homemakers in the 0-6 group, 192 homemakers in the 7-10 group and 107 in the 11 and over group.

Milk group. For the milk group there was no significant relation between homemakers who named milk as one of the food groups needed to keep healthy and increase in diet score. However, an almost equal percent (77-78 percent) named milk on first food recall in each of the 0-6 and 7-10 increase in diet score groups as compared to those in the 11 and over increase in diet score (73 percent). On the latest food recall there was a significant relation between homemakers who named milk and increase in diet score. An equal percent (94 percent) named milk on first food recall in each of the 7-10 group and 11 and over in the increase in diet score group as compared to those in the 0-6 increase in diet score group (87 percent).

Increase in knowledge of milk from first to latest recall was greater among those in the 11 and over increase in diet score group (21 percent) than among those in the 7-10 increase in diet score group (17 percent).

Meat group. For the meat group on the first food recall there was no significant relation between homemakers who named meat as one of the food groups needed to keep healthy and increase in diet score. However, a higher percent of those in 0-6 increase in diet score group (89 percent)

TABLE XXIII

FOOD KNOWLEDGE OF HOMEMAKERS IN FOUR FOOD GROUPS BY INCREASE IN DIET SCORE

Food Group Named	Increase in Diet Score							
	0-6 (N=98)		7-10 (N=192)				11-Over (N=107)	
	First	Latest	Change	First	Latest	Change	First	Latest
	-----Homemakers Per 100-----							
Milk ^b	78	87	9	77	94	17	73	94
								21
Meat	89	90	1	82	94	12	83	95
								12
Fruit/Vegetables ^{a,b}	98	91	7	88	97	9	87	96
								9
Bread/Cereals	72	84	22	64	83	19	65	91
								26
All four food groups	56	71	15	50	76	26	49	83
								34
Mean No. Named	3.3	3.5	0.2	3.1	3.7	0.6	3.1	3.8
								0.7

^aFirst recall, χ^2 value achieved at least the .05 probability level.^bLatest recall, χ^2 value achieved at least the .05 probability level.

named meat on first recall as compared to those with an almost equal percent (82-83 percent) in the 7-10 group and 11 and over increase in diet score group. On the latest food recall there was no significant relation between homemakers who named meat and increase in diet score. However, an almost equal percent (94-95 percent) named meat on the first recall in each of the 7-10 groups and 11 and over increase in diet score group as compared to those in the 0-6 increase in diet score group (90 percent).

Increase in knowledge of meat from first to latest food recall was greater among those in the 7-10 group and 11 and over increase in diet score group (12 percent) than among those in the 0-6 increase in diet score group (1 percent).

Fruit/vegetables group. For the fruit/vegetables group on the first food recall there was a significant relation between homemakers who named fruit/vegetables and increase in diet score. A higher percent of those in the 0-6 increase in diet score group (98 percent) named fruit/vegetables on first food recall as compared to those with an almost equal percent (87-88 percent) in the 7-10 group and 11 and over increase in diet score group. On the latest food recall there was a significant relation between homemakers who named fruit/vegetables and increase in diet score. An almost equal percent (96-97 percent) named fruit/vegetables on the first food recall in each of the 7-10 groups and 11 and over increase in diet score groups as compared to those in the 0-6 increase in diet score group (91 percent).

Increase in knowledge of fruit/vegetables from first to latest food recall was greater among those in the 7-10 group and 11 and over increase in diet score group (9 percent) than among the 0-6 increase in diet score (7 percent).

Bread/cereals group. For the bread/cereals group on the first food recall there was no significant relation between homemakers who named bread/cereals as one of the food groups needed to keep healthy and increase in diet score. However, a higher percent of those in the 0-6 increase in diet score group (72 percent) named bread/cereals on the first recall as compared to those with an almost equal percent (64-65 percent) in the 7-10 group and 11 and over increase in diet score group. On the latest food recall there was no significant relation between those homemakers who named bread/cereals and increase in diet score. However, a higher percent of those in the 11 and over increase in diet score group (91 percent) named bread/cereals on the first recall as compared to an almost equal percent (83-84 percent) in the 0-6 group and 7-10 increase in diet score group.

Increase in knowledge of bread/cereals from first to latest food recall was greater among those in the 11 and over increase in diet score (26 percent) than among those in the 0-6 increase in diet score (22 percent).

All four food groups. For the four food groups on the first food recall there was no significant relation between homemakers who named all four food groups as needed to keep healthy and increase in diet

score. However, a higher percent of those in the 0-6 increase in diet score group (56 percent) named all four food groups on first food recall as compared to almost equal percent (49-50 percent) in each of the 7-10 and 11 and over increase in diet score group. On the latest food recall there was no significant relation between homemakers who named all four food groups and increase in diet score. However, a higher percent in the 11 and over increase in diet score group (83 percent) named all four food groups as compared to those in the 7-10 increase in diet score group (76 percent).

Increase in knowledge of all four food groups from first to latest food recall was greater among those in the 11 and over increase in diet score group (34 percent) than among those in the 7-10 increase in diet score group (26 percent).

Homemakers in the 0-6 increase in diet score group named an average of 3.3 of the four food groups on the first food recall and 3.5 on the latest recall. Homemakers in the 7-10 increase in diet score group named an average of 3.1 of the four food groups on the first food recall and 3.7 on the latest food recall. Homemakers in the 11 and over increase in diet group named an average of 3.1 of the four food groups on the first food recall and 3.8 on the latest recall.

When the 11 and over increase in diet score group were compared with the 7-10 increase in diet score group the latter group had an increase of 0.7 food groups named while the former had 0.6 increase in average number food groups named.

Had More Than One Program Assistant

Table XXIV shows the percent of homemakers with more than one program assistant who named each of the basic four food groups when first and latest food recalls were taken. There were 108 homemakers who had more than one program assistant and 289 homemakers who did not have more than one program assistant.

Milk group. For the milk group on the first food recall there was no significant relation between homemakers who named milk as one of the food groups needed to keep healthy and had more than one program assistant. A higher percent of those who did not have more than one program assistant (77 percent) named milk when first entered the program as compared to those who had more than one program assistant (73 percent). On the latest food recall there was no significant relation between homemakers who named milk and had more than one program assistant. However, an almost equal percent (92-93 percent) named milk in each of the had more than one program assistant groups.

Increase in knowledge of milk from first to latest food recall was greater among those who had more than one program assistant (20 percent) than among those who did not have more than one program assistant (15 percent).

Meat group. For the meat group on the first food recall there was no significant relation between homemakers who named meat as one of the food groups needed to keep healthy and had more than one program assistant. However, an almost equal percent (84-85 percent) named meat in.

TABLE XXIV

FOOD KNOWLEDGE OF HOMEMAKERS IN FOUR FOOD GROUPS BY HAD
MORE THAN ONE PROGRAM ASSISTANT

Food Group Named	Had More Than One Program Assistant					
	Yes (N=108)			No (N=289)		
	First	Latest	Change	First	Latest	Change
	-----Homemakers Per 100-----					
Milk	73	93	20	77	92	15
Meat	85	91	6	84	95	11
Fruit/Vegetables	89	94	5	90	96	6
Bread/Cereals ^b	66	78	12	66	88	22
All four food groups	49	71	22	52	76	24
Mean No. Named	3.1	3.6	0.5	3.2	3.7	0.5

^bLatest recall, χ^2 value achieved at least the .05 probability level.

each of the had more than one program assistant groups. On the latest food recall there was no significant relation between homemakers who named meat as one of the food groups needed to keep healthy and had more than one program assistant. However, a higher percent of these who did not have more than one program assistant (95 percent) named meat as compared to those who did have more than one program assistant (91 percent).

Increase in knowledge of meat from first to latest food recall was greater among those who did not have more than one program assistant (11 percent) than among those who did have more than one program assistant (6 percent).

Fruit/vegetables group. For the fruit/vegetables group on the first food recall there was no significant relation between homemakers who named fruit/vegetables as one of the food groups needed to keep healthy and had more than one program assistant. However, a higher percent of those who did not have more than one program assistant (90 percent) named fruit/vegetables as compared to those who did have more than one program assistant (89 percent). On the latest food recall there was no significant relation between homemakers who named fruit/vegetables and had more than one program assistant. However, a higher percent of those who did not have more than one program assistant (95 percent) named fruit/vegetables as compared to those who did have more than one program assistant (91 percent).

Increase in knowledge of fruit/vegetables from first to latest food recall was greater among those who did not have more than one

program assistant (6 percent) than among those who did have more than one program assistant (5 percent).

Bread/cereals group. For the bread/cereals group on the first food recall there was no significant relation between homemakers who named bread/cereals and had more than one program assistant. However, an equal percent (66 percent) named bread/cereals in each of the bread/cereals group. On the latest food recall there was a significant relation between homemakers who named bread/cereals and had more than one program assistant. However, a higher percent of those who did not have more than one program assistant (88 percent) named bread/cereals as compared to those who did have more than one program assistant (78 percent).

Increase in knowledge of bread/cereals from first to latest food recall was greater among those who did not have more than one program assistant (22 percent) than among those who did have more than one program assistant (12 percent).

All four food groups. For the four food groups on the first food recall there was no significant relation between homemakers who named all four food groups and had more than one program assistant. However, a higher percent of those who did not have more than one program assistant (52 percent) named all four food groups as compared to those who did have more than one program assistant (49 percent). On the latest food recall there was no significant relation between homemakers who named all four food groups and had more than one program assistant.

However, a higher percent of those who did not have more than one program assistant (76 percent) named all four food groups as compared to those who did have more than one program assistant (71 percent).

Increase in knowledge of all four food groups from first to latest food recall was greater among those who did not have more than one program assistant (24 percent) than among those who did have more than one program assistant (22 percent).

Homemakers who had more than one program assistant named an average of 3.1 of the four food groups as needed to keep healthy on the first food recall and 3.6 on the latest food recall. Homemakers who did not have more than one program assistant named an average of 3.2 of the food groups needed to keep healthy on the first food recall and 3.7 on the latest food recall.

When the two groups of had more than one program assistants were compared each had an increase of 0.5 in the average number food groups named.

CHAPTER IV

SUMMARY OF MAJOR FINDINGS, IMPLICATIONS, AND RECOMMENDATIONS

I. PURPOSE

The purpose of this study was to determine the relation between homemakers' knowledge of foods and their personal and family characteristics. This study also was designed to determine improvement in homemakers' knowledge of the food groups from initial to latest food recall.

Specific Objective

1. To determine the relation between homemakers' knowledge of the four food groups and their personal characteristics.
2. To determine the relation between homemakers' knowledge of the four food groups and their family characteristics.
3. To determine the relation between homemakers' knowledge of the four food groups and types of assistance received by their families.
4. To determine the change in homemakers' knowledge of foods for health from the initial to the latest food recall.

II. METHODS OF PROCEDURES

The Population

The population of this study included all homemakers in the Expanded Food and Nutrition Education Program (EFNEP), from the ten original

program counties who had been participants for at least six months as of October, 1971, when the data were collected. The ten original Expanded Food and Nutrition Education Program counties in Tennessee were Roane, Hawkins, Putman, Dekalb, Warren, Coffee, Robertson, Davidson, Shelby, and Gibson. The counties were fairly evenly distributed across the state and, at the time of the study, represented approximately 73 percent of the total number of participant families in Tennessee.

The Sample

The sample included 397 participant families, which represented a 5 percent random sample from each of the ten original counties. It should be kept in mind that the sample study was representative only of program families in the ten original counties and not necessarily the entire state.

The Data

The data were collected for an earlier study made by Reginald William Slider II with the cooperation and assistance of Dr. Vernon W. Darter, Dean Emeritus of the Agricultural Extension Service of Tennessee and other Extension personnel with the assurance that the identities of individual participants would be kept confidential. Individual family record forms were sent to the State Extension office for recording. Data were collected and recorded from three family record forms available in the county Extension offices of the ten original program counties.

Homemakers' Knowledge of Food Needed to Keep Healthy and Their Personal Characteristics

Place of residence. Increases in knowledge of food in the milk, meat, bread/cereals groups from first to latest recall were greater among those of rural residence than among those of farm residence. For the fruit/vegetables food group increase in knowledge was greater among farm residence,

Race. Increases in knowledge of food in the meat, fruit/vegetables and bread/cereals groups were greater among white; while the black had the largest increase in knowledge of the value of the milk food group,

Age of homemakers. Increase in knowledge of food in the milk group from first to latest recall was greater among those in the 35-64 years of age group; while the under 35 years age group had a slightly greater increase in knowledge of food in the meat group. The 65 years and over age group had increases in knowledge of food in both bread/cereals and fruit/vegetables groups.

Education of homemaker. Increases in knowledge of milk, meat, bread/cereals, and fruit/vegetables groups from first to latest recall were greater among those with less than eight years formal education than among those with eight and over years of formal education.

Time in program. Increases in knowledge of food in meat, bread/cereals, and fruit/vegetables groups from first to latest recall were

greater among those with two or more years on the program than among those with less than two years on the program. The milk group increase in knowledge was greater among those with less than two years on the program.

Income. Increases in knowledge of food in milk and meat groups from first to latest recall were greater among those in the \$1000-2999 income group than among those below. On the other hand, the fruit/vegetables and bread/cereals group increases in knowledge were greater among those in the under \$1000 group.

Level of living. Increases in knowledge of food in milk and bread/cereals group from first to latest recall were greater among those in the high level of living category than among those of the low level of living. The fruit/vegetable food group increase in knowledge was greater among those in the low level of living. Both level of living groups were equal in percent of those increasing in knowledge.

Home ownership. Increase in knowledge of food in milk, bread/cereals and fruit/vegetables groups from first to latest recall were greater among those who rented their homes than among those who owned their homes. The meat food group increase in knowledge was greater among those who owned their homes than among those who rented their homes.

Homemakers' Knowledge of Foods Needed to Keep Healthy and Their Family Characteristics

Number family members. Increase in knowledge of food in the milk group from first to latest recall was greater among those with one or two family members than among those with five or more. The meat and fruit/vegetables group increase in food knowledge was greater among those with three or four family members than with those with one or two or five family members. The bread/cereals group increase in food knowledge was greater among those with five or more family members.

Children under 15. Increases in knowledge of food in milk, fruit/vegetables and bread/cereals groups from first to latest recall were greater among those with no family member under 15 years of age than among those with one or more family members under 15 years of age. The meat group increase in food knowledge was greater among those having children under 15 years of age present than among those not having them over 15 years of age.

Number of children in school. Increases in knowledge of food in milk, fruit/vegetables and bread/cereals from first to latest recall were greater among those with no children in school than among those with some children in school. The meat group increase in food knowledge was greater among those with one or more children in school.

Children receiving school lunch. Increases in knowledge of food in milk and bread/cereals groups from first to latest food recall were

greater among those with no children on the school lunch program than among those with children on the school lunch program. The meat and fruit/vegetables group increases in food knowledge were greater among those with one or more children on the school lunch program.

Homemakers' Knowledge of Foods Needed to Keep Healthy and Assistance Received By Their Families

USDA food program available. Increases in knowledge of food in milk, meat, fruit/vegetables and bread/cereals groups from first to latest recall were greater among those on donated food than among those on food stamps.

Where most food purchased. Increases in knowledge of food in milk, meat, fruit/vegetables, and bread/cereals groups from first to latest recall were greater among those who purchased food from other food stores than among those who purchased from super markets.

Family monthly income. Increases in knowledge of food in meat, fruit/vegetables, and bread/cereals groups from first to latest recall were greater among those in the \$0-151 per month income group than among those in the \$251 per month income group. The milk group increase in food knowledge was greater among those in the \$151-250 per month income group.

Family monthly food cost. Increases in knowledge of food in milk, meat, fruit/vegetables and bread/cereals groups from first to latest

recall were greater among those under a mean of \$58 per month food cost, than among those above this mean.

Percent of monthly family income spent for food. Increases in knowledge of food in milk and fruit/vegetables groups from first to latest recall were greater among those spending 26-40 percent of the family income each month for food than among the 25 percent or below group. The meat group increase in food knowledge was greater among those spending more than 40 percent group. The bread/cereals group increase in food knowledge was greater among those spending 25 percent of their monthly family income for food.

Servings of milk. Increase in knowledge of food in milk, fruit/vegetables and bread/cereals groups from first to latest recall were greater among those with inadequate servings of milk than among those with adequate servings. The meat group increase in food knowledge was greater among the adequate group.

Servings of bread/cereals. Increase in knowledge of food in meat, bread/cereals, and fruit/vegetables groups from first to latest recall were greater among those in the inadequate servings of bread group than among those in the adequate bread group. The milk group increase in food knowledge was greater among those in the adequate bread group.

Servings of meat. Increases in knowledge of food in milk and fruit/vegetables groups from first to latest recall were greater among those in the adequate meat group than among those in the inadequate group.

The bread/cereals group increase in food knowledge was greater among those in the adequate meat group. The meat group increase in food knowledge was equal in both meat groups.

Servings of vegetables. Increase in knowledge of food in the milk, and meat groups from first to latest recall were greater among the adequate vegetables group than among the inadequate vegetables group. The bread/cereals group increase in knowledge was greater among the inadequate vegetables group. The fruit/vegetables group increases in food knowledge were equal in both groups.

Adequacy of diet score. Increase in knowledge of food in milk, meat, and fruit/vegetables groups from first to latest recall were greater among the high group (score of 11 and over) than among the medium group (score of 8-10). The bread/cereals group increase in food knowledge was greater among those in the medium group (score of 8-10 or dietary adequacy).

Increase in diet score. Increases in knowledge of food in milk, meat and bread/cereals groups from first to latest recall were greater among the 11 and over increase in diet score group than among the 7-10 increase in score group. The fruit/vegetables group increase in food knowledge was greater among the 7-10 increase in score group.

Had more than one program assistant. Increases in knowledge of food in milk and meat groups were greater among those who had had more than one program assistant than among those with only one program

assistant. The fruit/vegetables and bread/cereals group increases in food knowledge were greater among those who had not had more than one program assistant.

Table XXV summarizes the relationships between homemakers' knowledge of each of the food groups at first and latest recall and each independent variable included in the study.

IV. IMPLICATIONS AND RECOMMENDATIONS

Based on the findings of this study, the following implications were drawn and recommendations made:

1. Knowledge of foods needed to keep people healthy was significantly influenced by selected personal and family characteristics of EFNEP program families. This indicates that nutrition educational needs of participant families could probably be met by planning programs for specific audiences or homemakers.

2. A significantly lower percent of homemakers with less than eight years of formal education had knowledge of the basic food groups. A special effort should be made to enroll the very young homemaker with low grade levels.

3. Rural families had significantly lower percents of homemakers with knowledge of several food groups, than did nonfarm or farm; therefore, consideration might be given to allocating more resources to low income families in rural areas.

4. Except for the milk group, there was a higher percent of homemakers with knowledge of healthy food among the white families than the

TABLE XXV (continued)

Factor	Milk First Latest	Meat First Latest	Fruit/ Vegetables First Latest	Bread/Cereals First Latest	All Four Food Groups First Latest
Children receiving school lunches	*				
Type of USDA food program			*		
Place where family purchased foods	*	*	*		*
Monthly family income	*	*	*	*	*
Monthly family food cost	*	*	*	*	*
Percent of family income spent for food	*	*		*	*
Adequacy of homemakers' milk diet	*				*
Adequacy of homemakers' bread diet			*		
Adequacy of homemakers' meat diet	*	*	*		
Adequacy of homemakers' fruit/vegetable diet	*	*			*

TABLE XXV (continued)

Factor	Milk First Latest	Meat First Latest	Fruit/ Vegetables First Latest	Bread/Cereals First Latest	All Four Food Groups First Latest
Adequacy of homemakers' diet score (four food groups)	*		*	*	*
Improvement in home-makers' diet score	*		*		
Number of program assistants worked with family				*	

*Chi square value achieved at least the .05 probability level.

black; therefore, special consideration should be given to enrolling black homemakers in the program.

5. There appeared to be no significant relation between the percent of homemakers with knowledge of foods needed by people to keep healthy and length of time in the program, which suggests that there was little additional advantage for an extended period of participant time. Encouragement could be given to graduate to participate on other Extension type programs.

6. Homeowners tended to have a higher percent of homemakers with adequate diets than renters; therefore, it would appear that families with less knowledge of foods needed for health would more likely be found among those families who rent their homes. Special consideration could be given to these homemakers also.

7. There was no significant relation between numbers of family members and knowledge of foods to keep healthy, however, each size family indicated a need for nutrition education. Encouragement could be given to those in all family sizes to participate in the program.

8. Homemakers with children under 15 years of age, neither in school nor on school lunch program made higher percent increase in knowledge of food groups. Special consideration should be given to families with children enrolled in schools for nutrition education.

9. The families on USDA Food Program with donated foods made greater increases in knowledge of foods needed to keep people healthy than food stamp recipients. Therefore, consideration might be given to special work with those families who receive food stamps.

10. Those program families with low incomes made greater increases in knowledge of foods. Consideration should continue to be given to this group and they should be encouraged to participate in other Extension educational programs.

11. Homemakers who had known only one program assistant had increased more in knowledge of food in milk and meat groups than those who had more than one program assistant working with them. Therefore, an attempt should be made to select and train program assistants who might be expected to stay on the job for a considerable length of time.

V. RECOMMENDATIONS FOR FURTHER STUDY

1. A study should be made to identify characteristics of families where the homemakers make most improvement during the first six months of the program.

2. A detailed study should be conducted to identify the role of the USDA food program in effecting the improvement shown in the Expanded Food and Nutrition Education Program.

3. Further research is needed to determine the most effective approach and methods for teaching different age groups and income levels.

4. Studies should be conducted to determine ways to motivate the low income people into becoming involved in programs designed to help them cope with today's nutrition problems.

5. Comparative studies should be done to determine factors that influence program assistants' effectiveness.

6. Studies should be conducted to characterize families who tend to stay with the program for extended periods of time.

7. A study should be done to determine characteristics of families not making appreciable improvement from first to latest food recall.

8. A study should be carried out to determine what combined or indicator characteristics might be used to identify families eligible for expanded nutrition work who have inadequate knowledge of the basic food group for health.

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APPENDIX



Food and Nutrition Education Program
FAMILY RECORD -- PART 1
DESCRIPTION

(1) Family ID No. _____

(a) Name _____

(b) Street _____

(c) City _____ (d) State _____

(e) ☐ Urban ☐ Rural nonfarm ☐ Farm

(2) (a) Date of first visit: _____

(b) Date record completed: _____

(3) Family on welfare (other than donated foods and food stamps): ☐ Yes ☐ No

(4) Family receiving food assistance on regular basis (other than donated foods and food stamps): ☐ Yes ☐ No

(5) Family gets some food from home garden: ☐ Yes ☐ No

FAMILY MEMBERS (FIRST NAME) (6)	AGE YRS. (7)	SEX		CHECK IF "YES"	
		MALE (8)	FEMALE (9)	NOW IN SCHOOL (10)	HAD SCHOOL LUNCH LAST WEEK (11)
NO. OF MEMBERS _____)					
TOTALS					

(12) HIGHEST GRADE IN SCHOOL COMPLETED BY HOMEMAKER: _____

(13) HOME:

(a) ☐ OWNER
(b) ☐ RENTER OR TENANT
(c) MONTHLY PAYMENT
\$ _____

(14) INSIDE HOUSE THERE IS:

(a) ☐ ELECTRICITY (e) ☐ FREEZER
(b) ☐ RUNNING WATER (f) ☐ COOK STOVE
(c) ☐ ICE BOX (g) ☐ OVEN
(d) ☐ REFRIGERATOR (h) ☐ HOT PLATE

(15) BUY MOST OF FOOD AT:

(a) ☐ SUPERMARKET
(b) ☐ SMALL LOCAL STORE

(16) USDA PROGRAM IN AREA:

(a) ☐ DONATED FOOD
(b) ☐ FOOD STAMP

FOOD SOURCES	HOW FAR FROM HOME			HOW USUALLY GET THERE			
	LESS THAN 1 MILE (a)	1-5 MILES (b)	MORE THAN 5 MILES (c)	WALK (d)	OWN CAR (e)	BUS OR TAXI (f)	OTHER (g)
(17) STORE (IN 15)							
(18) DONATED FOOD CENTER							
(19) FOOD STAMP ISSUANCE OFFICE							

(20) Check for home maker:

- (a) ☐ White (other than Spanish-American)
(b) ☐ Negro
(c) ☐ Spanish-American
(d) ☐ Oriental
(e) ☐ Indian
(f) ☐ Other

(21) Income last year for all family members. Include income from all sources, such as:

Wages and salaries

Pensions

Social Security

Support from others

Welfare payments

Income after expenses

Insurance payments

from business and farming

Veterans benefits

CHECK ONE:

- (a) ☐ Less than \$1,000 (d) ☐ \$3,000 - 3,999
(b) ☐ \$1,000 - 1,999 (e) ☐ \$4,000 - 4,999
(c) ☐ \$2,000 - 2,999 (f) ☐ \$5,000 and over

(22) Aide _____ (23) State No. _____ (24) Unit No. _____
(Name)

(Name)

(25) Family Record No. _____

(Fill out for each family in unit as soon as possible and yearly thereafter. Keep in family file after review by Trainer-Agent)

Food and Nutrition Education Program

FAMILY RECORD -- PART 2
HOMEMAKER FOOD AND FAMILY INCOME AND FOOD EXPENDITURE RECORD

(1) Family ID No. _____ (2) Date _____ (3) Food Record No. _____

(4) Record for _____
(name)

(5) What did you eat and drink in the last 24 hours?

To be filled by Aide		TO BE FILLED BY TRAINER AGENT				
		MILK	MEAT	VEG/ FRUIT	BREAD CEREAL	
Kind of food and drink (Enter main foods in mixed dishes)						
Morning						
Midmorning						
Noon						
Afternoon						
Evening						
Before Bed						
Total no. of servings:		(12)	(13)	(14)	(15)	
Totals at least --		1	1	1	1	
(16)		Yes ☐ No ☐				
Totals at least --		2	2	4	4	
(17)		Yes ☐ No ☐				

(6) What food and drink do you think people should have to keep healthy?

		TO BE FILLED BY TRAINER AGENT			
		MILK	MEAT	VEG./ FRUIT	BREAD CEREAL
Total:		(18)	(19)	(20)	(21)
Totals at least - -		1	1	1	1
(22)		Yes ☐ No ☐			

(7) Total estimated income for family last month: \$ _____
(Include wages and salaries, Social Security, welfare and insurance payments, pensions and cash support from others. If family has income from farming, include one-twelfth of last year's income after expenses.)

(8) How much did you spend for food last month, including both cash and credit? _____
(Do not include value of foods received under Donated Food or other food assistance programs. If in the Food Stamp Program, include only amount spent to purchase food stamps or coupons).

(9) Aide _____ (10) State No. _____ (11) Unit No. _____

(Fill out at earliest visit possible for homemaker in each family and every 6 months after. Keep in family file after review by Trainer Agent.)

VITA

Mary Louise Horton was born in Jefferson County near Dandridge, Tennessee, where she graduated from Maury High School.

Later she entered Carson Newman College in Jefferson City, Tennessee, and received a Bachelor of Science degree in Home Economics.

Upon graduation she taught for six years at Harrison Chilhowee Academy. She later taught at Maury High School. In 1957, she was employed by the Tennessee Agricultural Extension Service. She has worked with youth and adults in the Home Economics program.

She entered the graduate school at the University of Tennessee in January 1970 and received a Master of Science degree with a major in Agricultural Extension Education in August 1973.