

4-1-1962

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Dorothy Dickins

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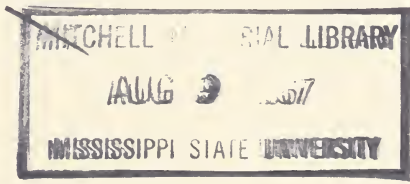
Dickins, Dorothy, "Use, knowledge, and attitudes concerning milk products by homemakers" (1962).  
*Bulletins*. 869.

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# Use, Knowledge, and Attitudes Concerning Milk Products By Homemakers

By  
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## TABLE OF CONTENTS

Introduction .....	3
Scope and Methods .....	3
Description of Families .....	3
Kinds and Amounts of Milk Products .....	4
Per Capita Consumption of Milk Products and Recommended Amounts .....	4
Knowledge About Nutritive Value of Milk Products .....	6
Use of and Attitudes About Cottage Cheese .....	7
Beverages for the "Reducer" .....	8
Beverages and Eating Out .....	10
Beverages and the Teen-Ager .....	10
Beverages to Serve Adult Friends at Dinner .....	12
Summary and Implications .....	14

# USE, KNOWLEDGE, AND ATTITUDES CONCERNING MILK PRODUCTS BY HOMEMAKERS

By

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## Introduction

Milk products are one of the four essential groups of foods needed for an adequate diet. Milk is a leading source of calcium essential for the development of bones and teeth and required for the proper functioning of muscles and nerves and for the normal clotting of blood. In addition, milk is an important contributor of riboflavin and high-quality protein, and provides many other vitamins and minerals as well as carbohydrates and fats. When fluid milk, or its equivalent in other forms of milk products, is omitted from the day's meals or used only in small amounts, calcium and sometimes riboflavin is likely to fall below amounts recommended.

It is the purpose of this study<sup>1</sup> to determine kinds and amounts of milk products used by representative urban families in Mississippi, adequacy of their consumption, and relationship of such consumption to knowledge and attitudes of homemakers concerning their use.

## Scope and Methods

This study included a representative sample of 808 families—517 white families and 291 Negro families residing in Meridian, Clarksdale, Picayune, and Winona. The 1960 Census shows population of the four cities to be 49,374; 21,105; 7,834; and 4,282, respectively.

Data were obtained during 1958 by personal interview with the use of a pre-tested schedule. The study was presented as a food rather than a milk products study. Questions pertaining to milk pro-

ducts were placed near the end of the schedule in order not to bias replies received.

## Description of Families

Only families in which at least one member had eaten one or more meals per day at home during the week preceding the interview were included. Institutional families (those with five or more boarders) and families of one person were not included. These families are relatively unimportant from the consumer market viewpoint. Income of the 517 white families during the year preceding the interview averaged \$4,827; and that of the 291 Negro families, \$1,747. In this study income was defined as the sum of receipts from farm operation minus farm expenses; wages and salaries; non-farm business receipts minus business expenses; and all other non-farm income except non-recurrent income such as inheritances. Forty-six percent of the white families and 92 percent of the Negro families had per capita incomes of less than \$1200 a year.

Estimating the size of the family by taking the total number of meals served from the home supply during the report week and dividing by 21 (the number of meals in one week), we found an average size for white families of 3.41 persons; for Negro families, 3.88 persons. Food costs per person per meal were less than

<sup>1</sup>This is an analysis of some of the Mississippi data obtained in connection with the Southern Regional Marketing Study SM-13 Revised.

20 cents in 26 percent of the white families and in 67 percent of the Negro families.

Most white homemakers had high school training and most Negro homemakers elementary school training, as is shown:

Last grade completed	White homemakers	Negro homemakers*
	Percent	Percent
4 or less	2	17
5 - 8	13	48
9 - 12 or business school	63	29
Some or all of college	22	4

\*Two percent gave no information.

Range of age of white and Negro homemakers was approximately the same. About one-half of the white and Negro women were under 40 years; about one-half 40 years or over.

#### Kinds and Amounts of Dairy Products Used

During the report week 50 percent or more of both white and Negro families had used fresh fluid whole milk that had been pasteurized and homogenized as well as fortified with Vitamin D; American or yellow cheese; and ice cream (Table 1). Fifty percent or more of the Negro families had used in addition two other milk products; namely, non-fat dry milk and evaporated whole milk. Whole milk, both pasteurized and homogenized as well as fortified, was the only type of fresh fluid milk used to any extent, except for buttermilk which was used by nearly half of the white and Negro families. Some families used buttermilk in baking breads which is a food pattern passed on from parents. One of the interesting facts revealed from a study of Table 1 is the small variety of milk products used during the week by many families. In fact, use of milk products seems to be limited to a few of the better known products. One way to increase

would be to get the homemaker to try a greater variety of these products.

#### Per Capita Consumption of Milk Products and Recommended Amounts

Milk products used by the family were converted into quarts of fluid milk equivalent which included not only fluid milk but the fluid milk equivalent of evaporated, condensed, and dry milk; cream; ice cream; and cheese, on the basis of the calcium content. Conversion factors developed by the Institute of Home Economics of the United States Department of Agriculture in 1958 were used to express the nutritive value of each product as compared with fluid whole milk.

Quantities of milk products for different family members in the moderate cost food plan developed by specialists of the United States Department of Agriculture were used in estimating milk needs for each family. The recommended dietary allowances of the National Research Council were used as the nutritional basis of the food plan.

Quantities of fluid milk equivalent per week suggested for various family members were: children 1-9 years, 6.0 qts.; children 10-12 years, 6.5 qts.; adolescents 13-20 years, 7.0 qts.; adults 21 years and over 3.5 qts.; and women lactating, 10.0 qts.<sup>2</sup>

No recommendations for children under a year were made by these specialists in the United States Department of Agriculture since most infants are fed according to the directions of a physician or nurse. Amounts fed vary with weight, growth, and the like. Therefore, in determining whether or not the family had milk in the quantities recommended, infants are treated separately.

The 517 white families included in this

<sup>2</sup>Family Economics Review, Institute of Home Economics, A.R.S., USDA, Washington, D. C., October 1957, Table 3, page 9.

Table 1.—Percentage of the 517 white and 291 Negro families using specified milk products in the home over a 7-day period, and average amount used by those using.

Product	Percentage using		Quantity used by those using	
	White families	Negro families	White families	Negro families
<b>FRESH FLUID MILK</b>				
Whole raw	2	4	8 qts.	9 qts.
Whole, past. creamline	3	1	6 qts.	4 qts.
Whole, past., homo.	8	2	9 qts.	3 qts.
Whole, past., homo., fortified	85	69	10 qts.	6 qts.
Skimmed, past.	4	1	4 qts.	6 qts.
Buttermilk	43	44	2 qts.	3 qts.
Choc. milk or drink	8	5	3 qts.	2 qts.
<b>DRY MILK</b>				
Skim or non-fat	38	61	14 oz.	16 oz.
Whole	0	*	---	5 oz.
Modified malt, homo., formulas, etc.	3	1	38 oz.	15 oz.
<b>CANNED MILK</b>				
Evap. whole	39	60	32 oz.	46 oz.
Evap. skim	1	6	51 oz.	44 oz.
Condensed, sweetened	7	3	18 oz.	16 oz.
<b>CREAM</b>				
Whipping	9	3	2 ½ -pts.	2 ½ -pts.
Coffee	4	*	3 ½ -pts.	4 ½ -pts.
Half & half	8	2	2 pts.	1 pt.
<b>DRY CREAM</b>				
	1	0	5 oz.	---
<b>CHEESE</b>				
American or yellow	73	57	1 lb.	1 lb.
Cottage	16	7	1 pt.	2 pt.
Cream	6	2	6 oz.	6 oz.
Spreads	5	1	5 oz.	5 oz.
Other (as blue, Swiss, pepper, etc.)	5	*	7 oz.	3 oz.
<b>FROZEN PRODUCTS</b>				
Ice cream	64	50	4 pts.	3 pts.
Sherbet	2	*	3 pts.	1 pts.
Dairy cream	1	1	2 pts.	2 pts.
Ice milk	7	3	3 pts.	3 pts.

Note: There were other products on the schedule, but these are not shown in Table 1 since no family used them during the report week.

\*Less than .5 percent.

study averaged 17.17 quarts of fluid milk equivalent during the week (or 5.04 quarts per capita). The 291 Negro families averaged 13.36 quarts of fluid milk equivalent during the study week (or 3.45 quarts per capita). The average recommended milk equivalent for white families was 4.35 quarts; for Negro families, 4.89 quarts. This means that the whites were getting, on the average, more than recommended amounts; the Negroes, less than recommended amounts. The important consideration is not average consumption but the percentage of fami-

lies getting less than the recommended amount. These percentages were as follows:

Percent of recommended amounts	White families	Negro families
	Percent	Percent
Less than 50	4	27
50 - 89	27	37
90 - 109	16	10
110 or more	53	26

As will be noted, about two-thirds of the white families and one-third of the Negro families had 90 percent or more

than recommended amounts of milk products.

Statistical analyses showed a highly significant relationship between size of household and recommended amounts of milk products received; also between cost per person per meal for food and recommended amounts of milk products received.<sup>3</sup> This was found in analyses of data from both white and Negro families. The relationship between recommended amounts of milk products received and income per capita was highly significant for Negro families but not significant for white families. Home background of the Negro homemaker (whether rural or urban South) was also highly significant. Also, there was some relationship between the use of recommended amounts and the age of the homemaker. Families with homemakers 50 years of age and over more often had recommended amounts.<sup>4</sup>

Many items that might show a relationship to use of recommended amounts of dairy products, such as size of household and expense per person per meal, are often highly inter-related. This cause-effect relationship can be recognized but not separated.

#### Knowledge of Nutritive Value of Milk Products

Each homemaker was read the following six questions about nutritive value of foods: Do you think: (a) Orange juice is a good source of vitamin C; (b) Butter has more food value than oleomargarine; (c) Milk is a good source of protein; (d) Milk is a good source of calcium for strong bones and teeth; (e) Yellow cheese is a good food to use for variety in place of a meat dish; (f) milk is a good source of some of the B vitamins? To assist her in answering these questions she was given a card with four possible replies listed—yes, no, uncertain, don't know. The correct answer was "yes" to all questions except (b). The correct answer to (b) was "no". The question about vitamin C in orange juice

was added since it was thought that this nutrition information was common knowledge due to extensive advertising by the citrus industry, and would therefore serve as a good check on data about nutritive value of milk products. The percentage of white and Negro women giving correct replies to the six questions was as follows

Questions	White homemakers	Negro homemakers
	Percent	Percent
Orange juice a good source of vitamin C	91	87
Butter has more food value than oleo	18	3
Milk good source of protein	86	86
Milk good source of calcium	99	95
Yellow cheese good meat substitute	86	81
Milk good source of some of the B vitamins	60	75

As will be noted, more white and Negro women thought milk a good source of calcium than thought orange juice a good source of vitamin C. However, the added phrase, "for strong bones and teeth", in regard to calcium may have affected replies.

Least known information by both groups concerned the nutritive value of butter versus oleomargarine. Butter, "the high-priced spread", no doubt has prestige that oleomargarine does not have. On the other hand, replies to the butter-oleo question may have been affected by the previous question, "Do you think orange juice is a good source of vitamin C?", for which the correct answer is "yes".<sup>5</sup>

<sup>3</sup>Significant at the 1% level according to chi-square tests.

<sup>4</sup>Significant at the 5% level in white families and lacking just a fraction of being significant at the same level in Negro families.

<sup>5</sup>"No" was the correct answer to only one of the six questions used in the regional schedule. A study of the effect of the previous questions on replies could not be made since correct replies to all questions except one were "yes".

A relationship was found between replies to only two of the nutrition questions and recommended amounts of milk products received, both of these in the case of white families. The two questions were: Do you think yellow cheese is a good food to use for variety in place of a meat dish; and; do you think milk is a good source of protein?<sup>6</sup>

The low relationship between use of recommended amounts of milk products and possession of technical information about their nutritive value is in line with findings in studies made by home economists and sociologists concerning use and knowledge.<sup>7</sup> The findings of this study should not be interpreted to mean that knowing about nutritive value of milk products is not important. These findings should be interpreted to mean that there should be increased emphasis on techniques of getting the recommended amounts of dairy products into family diets, especially in diets of large families and families of low socio-economic status. This cannot be done by merely emphasizing the nutritive values which these products have.

#### Use of and Attitudes About Cottage Cheese

Homemakers were asked if they thought cottage cheese was good for them. The replies of white and Negro homemakers to this question were as follows:

Replies	White homemakers*	Negro homemakers
	Percent	Percent
Yes	82	63
No	7	17
Don't know	10	20

\*One percent gave no reply.

This means that one-third of the Negro and one-fifth of the white women either did not know whether or not cottage cheese was good for them, or thought it was not good for them.

Those who thought cottage cheese was good for them were asked why. Reasons given were:

Reasons cottage cheese good for you	White homemakers	Negro homemakers
	Percent	Percent
Low in calories	33	36
A milk product	34	33
Easily digested	11	9
Protein content	10	5
Vitamin content	4	7
Doctor recommended	3	4
Calcium content	4	1
Other reasons	1	5

Thirty-three percent of the white homemakers and 36 percent of the Negro homemakers thought cottage cheese was low in calories. Twenty-five percent of the white women were trying either to lose weight or to maintain the same weight. The percentage of Negro homemakers thus concerned about weight was 19. No relationship was found, however, between frequency of using cottage cheese and what was being done about weight. One factor may be the practice by distributors of adding heavy cream to cottage cheese. In many outlets only creamed cottage cheese is available.

Cottage cheese has been promoted as a food for the "reducer". As will be noted, however, more women gave other reasons why it was good for them. Perhaps in sales promotion more emphasis needs to be placed on other features of cottage cheese.

Low calorie content of cottage cheese

<sup>6</sup>There was a significance at the 1% level between replies to the first question and use of recommended amounts of milk products. There was a significance at the 5% level between replies to the second question and use of these amounts.

<sup>7</sup>See (a) Knowledge of Nutrition as Related to the Use of Dairy Products, Dorothy Dickins and Virginia Ferguson. Journal of Home Economics, June 1958; (b) What the Homemaker Knows About Nutrition, C. M. Young. Journal of American Dietetic Assoc., March, April, May 1956; (c) The Home-Produced Food Supply of Non-Owner Farm Families, Dorothy Dickins. Miss. Agri. Exp. Sta. Bul. 512, March 1954; (d) Knowledge and Use of Recommended Farm Practices, H. H. Aurbach, Miss. Agri. Exp. Sta. Information Sheet 540, June 1956.



with no cream added might well be stressed in programs directed towards older white women; and towards Negro homemakers with higher income per capita and more schooling who were more often found to be doing something about their weight.<sup>8</sup> More emphasis might well be given to production of more palatable low-caloric cottage cheese.

There was a close relationship between opinion as to whether cottage cheese was good for you and frequency of use.<sup>9</sup> Thirty-one percent of the white women who said it was good for you used it often; 5 percent who said it was not good for you used it often. These percentages for Negro women were 21 and 0 respectively (Table 2). Older white homemakers (50 years and over) with higher per capita incomes and more schooling more often said cottage cheese is good for you than younger homemakers with lower per capita incomes and less schooling. Negro homemakers with more schooling more often said cottage cheese is good for you than those with less schooling.

percent

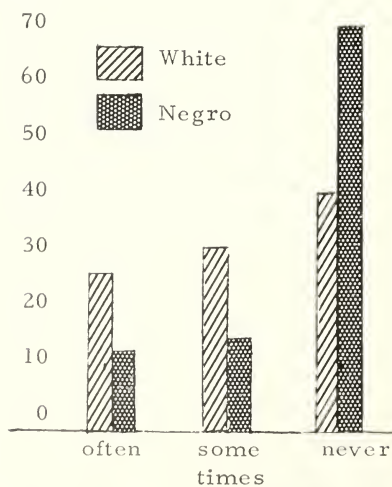


Figure 1. Frequency of use of cottage cheese by white and Negro families.

It is important that homemakers consider cottage cheese to be good for them, since this opinion is associated with greater use. In educational programs with homemakers of limited schooling more attention might be given cottage cheese, its food value, and its uses.

### Beverages for the "Reducer"

The following statement was read to homemakers: A grown person is being careful about eating in order to lose a little weight. This person has a light breakfast and a moderate evening meal. If a lettuce and tomato sandwich is selected for lunch, what drink would you suggest with it?

The following drinks were suggested by white and Negro homemakers.

Drink	White	Negro
	homemakers	homemakers
	Percent	Percent
Milk, skim or non-fat dry	25	23
Milk, whole or flavored	23	15
Tea	21	8
Fruit, vegetable juices	4	22*
Coffee	13	5
Soft drinks	3	7
Buttermilk	3	4
Powdered drink	0	1
Other, none, or don't know	8	15

\*In a study of "Collection Methods in Dietary Surveys", Southern Cooperative Series, Bul. 23, April 1952, it was suggested that oranges are a prestige food with Negroes and consumption therefore more likely to be overestimated. This may apply to juices since orange juice is one of the most common juices.

The principal reason for suggesting milk (skim, or non-fat dry), tea, fruit

<sup>8</sup>Significant at the 1% level according to chi-square test for what was being done about weight by Negro women and education, and at 5% level for what was being done about weight by white women and age, and at the same level for what was being done about weight by Negro women and income per capita.

<sup>9</sup>Significant at the 1% level for both whites and Negroes.

Table 2.—Relationship of attitudes towards cottage cheese and frequency of use.

Race and frequency of use	Whether cottage cheese is good for you			Total No.
	Yes	No	Don't know	
	Percent	Percent	Percent	
<b>WHITE FAMILIES</b>				
Often*	31	5	8	138
Sometimes	34	33	16	165
Never	35	62	76	210
Total No.	426	37	50	513**
<b>NEGRO FAMILIES</b>				
Often*	21	0	3	40
Sometimes	22	10	3	47
Never	57	90	93	202
Total No.	180	50	59	289**

\*Means once a week or more often.

\*\*Several gave no replies as to frequency of use.

or vegetable juices, coffee, soft drinks, buttermilk, and powdered drinks was "few calories". The calories contained in one cup of these beverages are as follows:

Beverages	Calories
Whole milk	166
Non-fat (skim) milk	87
Buttermilk	87
Carbonated beverages	107
Orange juice (canned unsweetened)	109

Tea and coffee would have no calories unless sugar, milk, or other ingredients with calories were added. Powdered drinks can be purchased with or without sugar; but when purchased unsweetened, directions are for 1-1½ cups of sugar to two quarts of water. The main reason for suggesting whole or flavored milk was "nourishing" (including "healthful", "has protein").

These two reasons, "few calories" and "nourishing", accounted for about 90 percent of those given for choice of a specified drink with a lettuce and tomato sandwich, as is shown:

Reason	White homemakers	Negro homemakers
	Percent	Percent
Few calories	64	68
Nourishing	29	21

No relationship was found between what the women were doing about their own weight and the beverage they choose to drink with the tomato sandwich.

A relationship was found, however, between the usual beverage of both white and Negro homemakers at noon in cold weather and the beverage they suggested with the lettuce and tomato sandwich.<sup>10</sup> Such a relationship was not found between the usual beverage of homemakers at noon in warm weather and their choice of a beverage with the sandwich. This difference is related to the fact that about one-half of the women chose a milk drink with the lettuce and tomato sandwich, and that milk was the usual drink of both white and Negro women much more often in cold than in warm weather.

If the homemaker did not suggest some type of milk drink with lettuce and tomato sandwich she was asked what she thought of having milk with this sandwich. The percentages of white and Negro homemakers classified by thoughts about having milk were as follows:

What homemakers thought of having milk	White homemakers	Negro homemakers
	Percent	Percent
Would add calories, too fattening	39	48
O.K., if skim or buttermilk	36	28
O.K., if she likes it	13	17
Wouldn't go with sandwich	5	4
Nourishing, healthful	5	2

<sup>10</sup>For whites the relationship was significant at the 1% level, and for Negroes at the 5% level, according to chi-square tests.

From the replies it would seem that about three-fourths of the white and Negro women think of whole milk as a fattening food. A comparison of the caloric content of whole milk with some other foods rich in protein shows the fallacy of this idea. The caloric content of some common units of such foods is, for example:

Food and unit	Calorie content
1 cup whole milk	166
3 oz. hamburger	316
1 cup beef and vegetable stew	252
1 medium pork chop	292
2 oz. boiled ham	172
3 oz. beef rib roast	266

### Beverages and Eating Out

Homemakers were asked: "Do you sometimes eat at a restaurant, cafeteria, or other place like that?" Only 43 percent of the white homemakers and 11 percent of the Negro homemakers replied yes. Those who ate "out" were asked what they usually had to drink in cold and warm weather with four types of orders: (1) a plate lunch with pork chops, (2) a hamburger, (3) a roast beef sandwich and (4) a fish plate. Pictures of these were shown each interviewee.

The percentages of total drinks mentioned by white and Negro homemakers in connection with these four lunches were as follows:

Drink*	White homemakers	Negro homemakers
	Percent	Percent
Coffee	38	25
Soft drink	22	36
Tea	32	21
Milk (all kinds)	7	15

\*Does not add up to 100% since a few mentioned juices and powdered drinks.

Coffee was named by more white homemakers; soft drinks by more Negro homemakers. Milk ranked fourth in both groups. As will be noted in Table 3, more white and Negro women named milk in connection with the roast beef sandwich and the plate lunch. Few named milk in connection with the fish plate. There is a folk rule with which

many are familiar, "Never eat fish and milk together", which may be related to the fact that few chose milk with the fish plate.

Homemakers were asked why they selected that particular beverage with that lunch for that season. The three most common reasons given in connection with all beverages named by both white and Negro homemakers were:

Reasons*	White homemakers	Negro homemakers
	Percent	Percent
Go together	42	28
Like taste, prefer, habit, fills you up	27	20
Warm/cold weather drink	16	29

\*Does not add up to 100% for reasons given by relatively few are not listed.

The reason most often given for choice of milk with the four lunches was "they go together". This was also the most important reason for choice of a soft drink with the lunch. "Like taste, prefer, habit" was the reason most often given for the selection of tea with the lunch. The reason most frequently given for choosing coffee was, "It's a warm/cold weather drink". "They go together" was also mentioned often as a reason for choice of coffee and tea.

What is it that makes people think that certain lunches go with milk and certain lunches go with soft drinks? An answer to this question is important information for the milk industry as well as other industries. Do certain foods actually taste better together, or is it a matter of training, habit, or other factors? This whole area is in need of much research effort.

### Beverages and the Teen-Ager

The following statement was read to interviewees: A teen-ager I know likes milk but drinks cokes most of the time. Why do you think she does that? The percentage of white and Negro homemakers giving specified replies was as follows:

Reason*	White homemakers	Negro homemakers
	Percent	Percent
To be with the crowd	30	17
Likes taste of cokes	15	24
Habit, custom, fad	16	15
Cokes not fattening	10	10
Cokes easier to get, cheaper	9	8
To be grown up	7	8
Cokes give energy, pep	6	6
Parents allow, keep cokes on hand	1	1

\*Does not add up to 100% for replies of "don't know" and "no reply" are not included.

Reasons given by women with different educational and home backgrounds were studied. A highly significant relationship was found between the reasons given by white and Negro homemakers and schooling. The women with more schooling (both white and Negro) more often gave "to be with the crowd" as a reason than did the women with less schooling. On the other hand, the women with less schooling more often replied, "likes taste of cokes" than did the one with more

schooling. No relationship was found between home background and the reason she thought teen-agers drank cokes when they liked milk.

Homemakers were asked not only about why the teen-agers would drink cokes most of the time, but also about what they would say to encourage them to drink more milk. The comments homemakers would make to teen-agers to get them to drink more milk were:

Comment*	White homemakers	Negro homemakers
	Percent	Percent
Milk is healthful	50	62
Insist she drink milk	5	12
Cokes not good for you	8	8
Milk good for bones and teeth	10	5
Add syrup, malt; keep milk on hand	9	4
Milk good for complexion	7	1
Milk not fattening	1	1
Don't follow crowd; have mind of your own	1	1

\*Does not add up to 100% since it does not include replies of "don't know" and "no reply".

Table 3.—Beverages white and Negro homemakers report they usually have in cold and warm weather with four types of lunches.\*

Lunch and beverage	White homemakers		Negro homemakers	
	Cold weather	Warm weather	Cold weather	Warm weather
	Percent	Percent	Percent	Percent
<b>PLATE LUNCH (pork chops)</b>				
Coffee	67	17	53	3
Tea	19	76	7	55
Milk (all types)	12	3	30	10
Soft drinks	2	4	10	29
<b>HAMBURGER</b>				
Coffee	42	11	29	3
Tea	4	14	6	7
Milk (all types)	6	4	13	3
Soft drinks	47	71	52	87
<b>ROAST BEEF SANDWICH</b>				
Coffee	56	13	42	10
Tea	13	43	16	28
Milk (all kinds)	15	15	19	24
Soft drinks	16	28	23	35
<b>FISH PLATE</b>				
Coffee	68	29	45	18
Tea	25	61	10	39
Milk (all types)	2	2	10	0
Soft drinks	5	6	24	27

\*Juices and powdered drinks were not tabulated because there were so few cases.

The comments made by white homemakers were related to their age and schooling. No relation was found in comments of Negro homemakers and these two factors.

White homemakers with more schooling more often mentioned "add syrup, malt; keep on hand" and "milk good for complexion" than did those with less schooling. On the other hand, those with less schooling more often mentioned "milk is healthful" and "insist she drink milk" than did those with more schooling.

More younger than older women mentioned "milk good for complexion" and "add syrup, malt; keep on hand". More older women than younger women said "tell them it's healthful". Perhaps "healthful" has been mentioned too often in connection with milk while "looks, appearance, and popularity" have been mentioned too seldom.

### Beverages to Serve Adult Friends at Dinner

All interviewees were asked: In cold/warm weather when you have adult friends to dinner (at home) what drink do you usually serve? As will be noted in Table 4, most homemakers, both white and Negro, said they served coffee to adult friends at dinner in cold weather and tea in warm weather. Homemakers

were not asked whether or not it was hot or iced tea, nor whether the coffee was hot or iced. This question was not necessary since it is common knowledge that the coffee usually served in Mississippi is hot; the tea iced.

The most important factors in what was served to adult friends in warm and cold weather seemed to be the homemaker's usual beverage at dinner and the husband's usual beverage at dinner. In other words, adult friends were served the beverage which the homemaker and her husband generally had at this meal and season.<sup>11</sup>

After the homemaker told what drink she usually served adult friends at dinner she was asked whether she offered milk to these adult friends. The following percentages of white and Negro women reported they offered it most of the time, sometimes, or never:






Frequency of offering	White homemakers	Negro homemakers
	Percent	Percent
Most of the time	34	25
Sometimes	27	22
Never	39	53

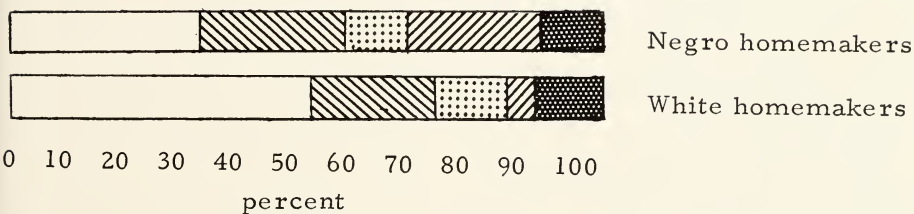
<sup>11</sup>According to chi-square tests the relationship between what was served at the evening meal to adult guests in both white and Negro families in both warm and cold weather and the usual beverage at the evening meal of both husband and wife in white and Negro families in cold and warm weather was significant at the 1% level.

Table 4.—Drink usually served in cold and in warm weather when homemaker has adult friends to dinner at home.

Drink	Cold weather		Warm weather	
	White homemaker	Negro homemaker	White homemaker	Negro homemaker
	Percent	Percent	Percent	Percent
Coffee	88	65	9	5
Tea	7	12	85	60
Milk	3	3	1	1
Flavored milk	1	5	0	0
Buttermilk	*	0	0	*
Fruit and vegetable juices	0	1	*	7
Powdered drink	0	2	1	8
Soft drink	0	3	3	10
Other, none, don't know	1	9	1	9

\*Less than .5 percent.

-  If children present
-  Doesn't drink beverage served
-  If ill or on a diet
-  If plenty milk on hand
-  Other, no reply



**Figure 2. Conditions which lead homemakers to sometimes offer milk at dinner to adult friends.**

Those women who replied "sometimes" were asked under what conditions they offered it. Figure 2 shows these conditions. The most frequent of these is when children are present. The children are offered milk and in doing this the polite thing seemed to be to ask adults if they would not like some also, especially if the number of adults is small.

Another condition under which milk is offered is when the adult friend does not drink the beverage served. Also, milk is offered adult friends when it is known they are not well, or on a diet. One-fifth of the Negro women mentioned offering milk when plenty was on hand.

All interviewees were asked why they thought some families did not offer milk to adults. Replies given were as follows:

Why I don't offer milk	White homemaker	Negro homemaker
	Percent	Percent
Milk is for a child; adults like stimulating drink	45	38
Would not have milk on hand	13	25
Too expensive	15	18
Never drink milk themselves so don't think of it	15	10
Social custom not to drink milk at company meals	4	2
Other	2	1
Don't know	6	6

Underlying all these reasons for not offering milk to adult friends are two basic one: (1) Milk is children's food. If there are no children in the household there may not be any milk on hand.

(2) Milk is expensive. Neither of these two reasons are accurate. Milk is a food, not just a drink. It is a food needed by adults as well as by children. Milk is not an expensive food. In fact, considering nutrients one gets from milk, it is one of the cheapest foods.

### Summary and Implications

The purpose of this particular study was to determine use, attitudes, and knowledge concerning milk products by Mississippi urban homemakers. Data from 517 white and 291 Negro urban families of Mississippi are included. Income of white families averaged \$4,827; and that of Negro families, \$1,747. Average family size of white families was 3.41 persons; of Negro families, 3.88.

The 517 white families consumed an average of 17.17 quarts of fluid milk equivalent during the report week (or 5.04 quarts per capita). The 291 Negro families consumed 13.36 quarts of fluid milk equivalent during the study week (or 3.45 quarts per capita). The average recommended milk equivalent per capita for white families was 4.35 quarts; for Negro families, 4.89 quarts. Thirty-one percent of the white families and 64 percent of the Negro families had less than 90 percent of the recommended amount of dairy products for families of their size and composition. Small families, families spending more per person per meal, and families with homemaker 50 years of age and over more often used milk products in recommended amounts.

The percentage of homemakers giving correct replies to five statements about the nutritive value of dairy products was high except for the statement concerning food value of butter as compared with oleo-margarine.

Little relationship was found between ability to answer technical questions about nutritive value of milk products and use of recommended amounts of these products.

One-third of the Negro women and one-fifth of the white women either did not know whether or not cottage cheese was good for them, or thought it was not good for them. No relationship was found between frequency of using cottage cheese and what was being done about weight. However, there was a close relationship between opinion as to whether cottage cheese was good for you and frequency of use. Women, both white and Negro, with more schooling more often thought cottage cheese was good for them.

When asked to select a drink to serve with a tomato sandwich to a person trying to lose a little weight and what she thought of having milk with it, it was found that about three-fourths of the white and Negro women think of whole milk as a fattening food.

When asked to name the beverage she would order when eating at a restaurant, cafe, etc., with four types of lunches, milk ranked fourth by both white and Negro homemakers. The reason most often given for choice of milk with the four lunches was "they go together".

When asked why teen-agers who liked milk would drink cokes most of the time, homemakers with more schooling more often mentioned "to be with the crowd"; those with less schooling, "likes taste of cokes".

When asked what they usually served to adult friends at dinner in cold and warm weather most homemakers named the beverage she or her husband usually drank at this meal, which was coffee in cold weather and tea in warm weather. The principal reasons given for some homemakers not offering milk was that it was regarded as children's food and that adults like a stimulating drink.

Some of the implications of this study for producers, processors, retailers, and educators are:

(1) Large families and families spending small amounts per person per meal need assistance in ways and means of

getting more milk products into family meals.

(2) Opportunities should be provided for tasting and learning to like the great variety of milk products on the market.

(3) There needs to be increased emphasis on techniques of getting the recommended amounts of dairy products into family diets. This cannot be done by merely emphasizing the nutritive values (protein, calcium, vitamin B value) which these products have.

(4) Sales promotion of cottage cheese should have a slogan other than "weight reduction". "It's good for you" is the type of information that leads to greater use by the average family.

(5) Programs on use of low-calorie dairy products (such as cottage cheese with no cream, fresh skim milk, evaporated skim milk, non-fat dry milk) might be centered on the older white homemakers and Negro homemakers with more schooling, since members of these groups are more frequently reducing or trying to maintain the same weight.

(6) The fact that whole milk is not a "fattening" food needs to be continually

stressed in educational and promotional programs.

(7) An effort needs to be made to determine why there is a feeling that some foods go with milk, others do not. What are these foods that go with milk?

(8) It would seem that many homemakers are using the wrong psychology with teen-agers in getting them to take more milk. What are the best appeals? Athletic skill, good complexion, beauty, glamour? Have these appeals had a fair trial? Why are milk shakes so popular with the teen-agers? Is it because of flavor; or because of price prestige (they sell for 25c or more).

(9) Why is milk thought of as children's food rather than food for all people? Has too little emphasis been given to the fact that adults might have a stimulating drink, such as coffee or tea, as well as the food, milk. It need not be either/or, but both.

(10) Programs should show that milk is not expensive; they should also demonstrate uses of some of the cheaper forms of such products.