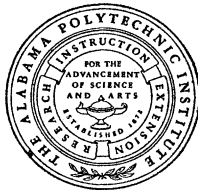


Household
USE of EGGS
in
Gadsden, Alabama



AGRICULTURAL EXPERIMENT STATION
of The **ALABAMA POLYTECHNIC INSTITUTE**

E. V. Smith, Director

Auburn, Alabama

CONTENTS

	<i>Page</i>
INTRODUCTION.....	3
Purpose of Study.....	4
Method of Study.....	4
DESCRIPTION OF FAMILIES STUDIED.....	4
Food Purchasing Habits and Expenditures.....	5
Socio-Economic Score.....	6
USE OF EGGS BY HOUSEHOLDS.....	6
Opinions About Competing Foods.....	8
Past and Present Use of Eggs.....	9
AVAILABILITY OF EGGS IN THE MARKET.....	9
EGG BUYING PRACTICES OF HOMEMAKERS.....	10
Consumer Buying Standards.....	11
Attitudes About Marketing Eggs.....	13
CONSUMPTION OF EGGS BY FAMILY MEMBERS.....	14
Reasons for Infrequent Egg Consumption.....	16
SOURCES OF INFORMATION ABOUT EGGS.....	17
Promotion of Eggs by Retail Food Stores.....	18
FAMILY CHARACTERISTICS ASSOCIATED WITH USE OF EGGS.....	19
Frequency of Eating Eggs by Homemaker or Husband.....	20
Family Age Distribution.....	20
Income, Size of Family, and Food Expenditures.....	21
Socio-Economic Scores.....	22
Egg Buying Habits.....	22
Other Influences on Egg Use.....	24
SUMMARY AND CONCLUSIONS.....	24
RECOMMENDATIONS.....	27
APPENDIX.....	30

HOUSEHOLD USE *of* EGGS *in* GADSDEN, ALABAMA¹

RUTH A. HAMMETT, *Assistant in Agricultural Economics*

J. HOMER BLACKSTONE, *Agricultural Economist*²

INTRODUCTION

SHIFT^S IN THE PATTERN of egg production and consumption by Alabama families have resulted from increases in urbanization and industrialization, the employment of women outside the home, and technological developments in the poultry industry. Previous studies of egg consumption have dealt largely with consumer habits and knowledge of grade, usually in other areas of the United States.³ More information is needed about egg purchasing practices of families in urban areas of the State.⁴ Especially needed is information about family characteristics that affect the number of eggs homemakers purchase for family use. Knowledge concerning household use of eggs may assist the egg

¹ This study was supported from funds provided by the Agricultural and Marketing Act of 1946 and by State research funds. It is part of a regional food marketing project in which Alabama, Arkansas, Georgia, Kentucky, Louisiana, Mississippi, South Carolina, Tennessee, Texas, and Virginia are cooperating.

² The authors acknowledge the assistance and cooperation given in the study by the 629 homemakers surveyed, the SM-13 Regional Food Marketing Technical Committee, and the enumerators who collected the data. Acknowledgment is also given E. F. Schultz, Jr., formerly biometrician, for assistance in planning the sample design, and to staff members of the Department of Agricultural Economics for helpful suggestions throughout the study.

³ Jasper, A. William. "Some Highlights from Consumer Egg Studies." *Agriculture Information Bulletin* No. 110. P.M.A., U.S.D.A. June 1953.

⁴ Van de Mark, Mildred S. "Consumption of Poultry Products. Factors Affecting Use of Eggs, Chicken, and Turkey in Alabama's Piedmont." *Bulletin* No. 306. API Agr. Expt. Sta. June 1957.

marketing industry in providing customers with adequate quantities of eggs of desired grades and sizes. It will also aid in locating areas where consumer education or promotion might increase sales, and in estimating market potentials for eggs in comparable urban areas.

Purpose of Study

This study is a contributing project to the Southern Regional Food Marketing Project, SM-13, "Retailing and Family Food Buying Practices as Related to the Marketing of Food." Its objective was to determine, in the purchase and use of eggs, (a) the influence of store offerings and retail marketing services, (b) the kinds and sources of information used by consumers, (c) the family buying practices, and (d) the importance of family characteristics, occupation, and income on household egg consumption.

Method of Study

The study was made in Gadsden, Alabama, an industrial city in the northeastern part of the State, with a population of 55,725 in 1950. Families included in the study were visited between October 5 and November 16, 1955. The current Gadsden city directory was the universe from which 688 addresses were selected by appropriate statistical procedure. Trained enumerators conducted personal interviews with homemakers and obtained 629 completed schedules from 509 white and 120 colored families. The number of colored people included in the study approximated the 19 per cent colored population in Gadsden. To be eligible for the study, a family must have consisted of two or more members who had eaten at least one meal a day from the home food supply over the 7 days previous to the interview. Families with no more than four boarders were also included.

DESCRIPTION of FAMILIES STUDIED

There were 3,253 people reported in the 629 families of the study; 2,662 were white and 591 were colored. Size of economic family was 3.5 persons in white and 4.2 in colored families. By age, the heads of households were about evenly divided between those under and those over 40 years. About 30 per cent of the families were all adults, 39 per cent had children 12 years of age or less, and 31 per cent had children 19 years of age and under.

White husbands and homemakers had an average education of 9.9 school grades completed. Colored husbands had completed 5.7 grades and colored homemakers averaged 7.5 grades.

The principal source of income for slightly over half of the families was from skilled labor in Gadsden's industries. White families reported an average annual income of \$4,554. Colored families had an average yearly income of \$2,817. Average annual income for all families was \$4,222. Per capita income, based on size of economic family, was \$1,301 for white persons, \$671 for colored persons, and \$1,173 for all persons included in the study. Eleven per cent of the families had annual incomes below \$2,000, 37 per cent between \$2,000 and \$4,000, 43 per cent \$4,001 to \$7,500, and 9 per cent had incomes in excess of \$7,500. For a more detailed description of the families studied, by race, see Appendix Table 1.

Food Purchasing Habits and Expenditures

Food was purchased in person by 93 per cent of the white and 98 per cent of the colored families. The wife alone purchased the food in about half the families. Husband and wife shopped together in a fourth of the families. Colored husbands more often shopped alone or with their wives than did white husbands. Food shopping lists were never used by over half the colored and a third of the white homemakers. The average family spent \$24.07 for food during the 7 days previous to the interview, of which 84 per cent was for food used at home, Table 1.

Fifty-seven per cent of the colored and 31 per cent of the white families spent less than \$16 per week for food for home use. Sixty per cent of the white and 80 per cent of the colored families spent under \$5 per person per week for food eaten at home. Colored families averaged 21 cents per person per meal for food, and

TABLE 1. AMOUNT AND PERCENTAGE OF FOOD EXPENDITURES PER WEEK BY KIND OF EXPENDITURE, BY RACE, 629 FAMILIES, GADSDEN, ALABAMA, FALL, 1955

Kind of expenditure	Average food expenditure per family per week					
	509 white families		120 colored families		629 families	
	Dollars	Per cent	Dollars	Per cent	Dollars	Per cent
Food for home use.....	21.27	83	15.72	89	20.21	84
Meals eaten out.....	3.13	12	1.08	6	2.74	11
Snacks eaten out.....	1.16	5	.93	5	1.12	5
TOTAL.....	25.56	100	17.73	100	24.07	100

white families 32 cents. Two-thirds of the white families spent between 20 and 39 cents per person per meal. A little over half the colored families spent an average of less than 20 cents per person per meal during the sample week. Details on food purchasing habits and expenditures, by race, are shown in Appendix Table 2.

Socio-Economic Score

A socio-economic score as well as annual income was used to measure the family level of living. This quantitative scale was based on ownership of certain material possessions and family participation in selected activities. Each of the nine items used in the scale was given a weight of 2 for a "yes" answer and 0 for a "no" answer. Possible family scores ranged from 0 to 18. White families had an average score of 12.2. Thirty-four per cent of the white families had scores of 11 or less; 66 per cent scored 12 or more. The average score of all colored families was 9.2. Seventy-four per cent of the colored families scored 11 or less and 26 per cent scored 12 or more. Average yearly income of colored families was equal to that of 62 per cent of the white families, but their average socio-economic score approximated that of 75 per cent of the white families. Family income and socio-economic scores were closely related, and tended to rise together. See Appendix Table 3 for items used, and for the percentage of families having each item.

USE of EGGS by HOUSEHOLDS

Other studies indicate that the average yearly per capita consumption of eggs is 359 in the urban areas of the South, and 343 in the cities of the United States.^{5, 6} Similar estimates would put the probable annual consumption in Gadsden at 374 eggs per capita for white and 338 for colored persons, or an average of 364 eggs per person in the city. Average consumption of eggs by families during the sample week was 31 for the white, 26 for the colored, and 30 for all families in the study. The number of eggs used per capita ranged from 0 to 31. White families used

⁵ "Food Consumption of Households in the South." Household Food Consumption Survey 1955. Report No. 4. U.S.D.A. December 1956.

⁶ "Food Consumption of Households in the United States." Household Food Consumption Survey 1955. Report No. 1. U.S.D.A. December 1956.

TABLE 2. PERCENTAGE OF FAMILIES BY RACE USING EGGS AND BY METHOD OF USE, 617 FAMILIES, GADSDEN, ALABAMA, FALL, 1955

Specific usage of eggs	501 white families		116 colored families		617 families	
	Eggs used	Families using	Eggs used	Families using	Eggs used	Families using
	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>
Main dish ¹	77	98	73	97	76	98
Baking.....	15	72	20	76	16	73
Other dishes.....	6	39	4	29	5	37
Lunches.....	2	15	3	17	3	16
TOTAL.....	100	---	100	---	100	---

¹ Fried, scrambled, boiled, poached, etc.

an average of 5.9 eggs per person during the 7 days previous to the interview. Colored families consumed an average of 5.2 eggs per person, and the average for all families was 5.8 eggs per capita per week.⁷ The difference in per capita egg consumption of white and colored families was not statistically significant. However, the two groups react differently in many of their egg purchasing and use habits. Consequently, they are reported separately throughout this report.

Eight white and four colored families had not used eggs the week previous to the interview. Of the 617 families who had used eggs, 98 per cent consumed them as a main dish, such as fried, scrambled, boiled, or poached eggs, Table 2. Seventy-six per cent of the eggs consumed were used in the preparation of main dishes. Most eggs were used for breakfast. In winter, 91 per cent of the families served eggs for breakfast. The remaining 9 per cent more often used eggs for the evening meal than at the noon meal during the winter months. In summer, 86 per cent of the families used eggs for the breakfast meal, and the remainder used eggs about equally for the noon and the evening meal main dishes.

When homemakers listed the foods their families should have every day, eggs were mentioned first by 7 per cent, second by 16 per cent, and third, fourth, or lower by 31 per cent, or a total of 54 per cent of all the homemakers. If the homemaker did not mention eggs, she was then asked what "protein foods" her family should eat every day. An additional 25 per cent then mentioned

⁷ Size of family included all persons who had eaten one or more meals from the home food supply during the 7 days previous to the interview. Average size of family was 5.2 persons in white families, 4.9 persons in colored families, and a weighted average of 5.2 persons in all families covered by the study.

eggs. Failure of 21 per cent of the homemakers to mention eggs to either question may have been because they did not eat them, or they were thinking of meals other than breakfast.

About 12 per cent of the homemakers had used eggs in ways new to them the past year. As a group, families of these homemakers used less than the average of 5.8 eggs per capita, suggesting that in these families eggs may not have been an important breakfast dish. White homemakers most often mentioned having made casseroles containing eggs for the first time. Colored homemakers said they had learned to poach eggs or to use eggs with cheese.

Opinions About Competing Foods

Suggestions by homemakers as to possible substitutes for fresh eggs made it evident that they were thinking in terms of a replacement for breakfast eggs, rather than of a food that would be a nutritional equivalent. A third of the suggestions involved some form of bread or cereal, a third related to meats, and a sixth concerned dairy products. The remaining sixth of the suggested substitutes included ice cream, pudding and cake mixes, dried eggs, and butter or jelly. Larger percentages of colored than white homemakers mentioned bread or meat, but more white homemakers would use dairy products if no fresh eggs could be obtained.

Three-fifths of the colored and half of the white homemakers said they would use dried beans rather than cheese or eggs for a meatless meal that would please their families most, Table 3. Eggs were more often chosen by white homemakers whose family income was above \$5,000, and by colored homemakers whose incomes were below \$2,000. Cheese was more popular than eggs in all other families, although preferences, on the whole were about evenly divided between the two foods. Families who used

TABLE 3. PERCENTAGE OF FAMILIES CHOOSING VARIOUS ITEMS AS REPLACEMENT FOR MEAT, BY RACE, 629 FAMILIES, GADSDEN, ALABAMA, FALL, 1955

Food choice	509 white families	120 colored families	629 families
	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>
Dried beans or peas.....	48	61	51
Cheese.....	26	19	25
Eggs.....	24	17	22
Cheese and eggs.....	2	3	2
TOTAL.....	100	100	100

more than the average number of eggs per capita often preferred additional eggs or eggs with cheese for the meatless meal. Dried beans or peas were consistently chosen by homemakers in families where they or their husbands never ate eggs.

Past and Present Use of Eggs

Two-thirds of the families reported they were using about the same number of eggs during the year of this study as in the previous year. Most homemakers felt that only a change in the number of persons fed from the home food supply would cause any deviation from the usual number of eggs used. For the majority of the families, eggs were purchased in routine numbers, except when planning for guest meals. Homemakers said they usually used 6 more eggs per week during the fall quarter of the year because of more baking, party desserts, and entertaining.

Three-fourths of the white and half of the colored respondents reported they were buying all the eggs they could use under present cooking and eating habits. Low income or a seasonal rise in egg prices were reasons given by a majority of the colored women for using fewer eggs. The relatively few white homemakers who were limiting egg purchases because of price rises were in various income groups, suggesting this reason was primarily a personal one. Five per cent of all homemakers said they would have bought an additional 2 dozen eggs per family per week had the money been available for this purchase.

AVAILABILITY of EGGS in THE MARKET

Special schedules covering an 18 per cent random sample of food stores in Gadsden established that eggs were available to customers in a range of sizes, shell color, and prices, but often only in one grade. Store hours of business, credit, home delivery, and parking areas made it convenient to purchase eggs. In addition, eggs could be bought from farmers or other persons who had surplus home production.

Thirty-one per cent of the stores sold only large eggs, 21 per cent sold only medium eggs, and 2 per cent sold only small eggs. Forty-six per cent of the stores handled two or more sizes. A third of the stores preferred to sell only white eggs, another third offered the customer a choice of white or brown, while the remaining third sold eggs of either color depending on what whole-

salers delivered to their stores. Eggs in all stores were labeled in accordance with requirements of the Alabama Shell Egg Law. One store sold only Grade B eggs, 2 stores had Grades A and B, but the other 36 stores sold only Grade A eggs. Ungraded eggs may have been purchased by housewives from small food stores or farmers, received as gifts, or produced by home flocks. However, no attempt was made to check on the grade of eggs in the possession of families. Egg prices in food stores, by size but without regard to grade, averaged 69 cents a dozen for large eggs, 58 cents for medium eggs, and 46 cents for small eggs. The average retail store price per dozen for eggs available to customers during the 2 weeks of the survey was 61 cents a dozen.

EGG BUYING PRACTICES of HOMEMAKERS

Of the 1,637 dozen eggs acquired by families the previous 7 days, 96 per cent had been consumed. Nine per cent of the eggs acquired by colored families were home produced, whereas only 3 per cent of those used in white families were from this source. Ninety-three per cent of the white and 85 per cent of the colored families had purchased all eggs used the past 7 days. Two per cent of the white and 7 per cent of the colored families supplemented home produced or gift eggs with purchased eggs. Five per cent of the colored and 2 per cent of the white families used only home produced eggs. One per cent of the white and 3 per cent of the colored families used eggs during the period of the study that had been purchased before the study week. Two per cent of the white but none of the colored families had used gift eggs.

Three-fifths of the families purchased all eggs from retail food stores. A third of the white and a fifth of the colored families bought eggs from farmers, Table 4. Ninety per cent of the white

TABLE 4. PERCENTAGE OF FAMILIES PURCHASING EGGS FROM VARIOUS SOURCES, BY RACE, 596 FAMILIES, GADSDEN, ALABAMA, FALL, 1955

Source of purchase	485 white	111 colored	596
	families	families	families
	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>
Retail food stores.....	58	75	61
Farmers, peddlers.....	34	19	31
Neighbor, friend, relative.....	4	1	3
More than one source.....	4	5	5
TOTAL	100	100	100

and 74 per cent of the colored families who bought from farmers or peddlers had a standing order for regular delivery of a specified number of eggs. Percentages of family members (standing orders excluded) who bought the week's supply of eggs were as follows:

<i>Family egg buyer</i>	<i>Percentage</i>
Homemaker alone	52
Homemaker and husband together	24
Husband alone	15
Other adult in family	9

Eighty-one per cent of the families paid cash for purchased eggs, 12 per cent used credit, and 7 per cent used a combination of cash and credit. A fourth of the families had eggs delivered, two-thirds of the families carried them home, while the remainder used both methods. Seventy-four per cent of the families bought eggs only once a week, 21 per cent several times a week, while the remaining 5 per cent bought eggs at intervals of longer than a week. Friday or Saturday were the most popular days to buy eggs for 62 per cent of the families. Twenty-six per cent of the families preferred to buy eggs early in the week, and 12 per cent bought them as needed or when the money was available without regard to a specific day of purchase. Two-thirds of the families bought 2 dozen or fewer eggs per purchase, Table 5.

TABLE 5. PERCENTAGE OF FAMILIES BUYING VARIOUS QUANTITIES OF EGGS PER PURCHASE, BY RACE, 596 FAMILIES, GADSDEN, ALABAMA, FALL, 1955

Number of eggs per purchase	485 white families	111 colored families	596 families
	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>
1 dozen or less.....	21	36	24
1.1 to 2 dozen.....	41	45	41
2.1 to 3 dozen.....	21	14	20
3.1 dozen or more.....	17	5	15
TOTAL.....	100	100	100

Consumer Buying Standards

Homemakers reported they looked for freshness, grade, and size when they shopped for eggs. Brand name was important to 22 per cent of the homemakers. Of these, 4 out of 5 named a specific brand they purchased. Date of packaging, as shown on the case or carton, was noted by two-fifths of the respondents. Three-fourths of the homemakers reported they looked for grade

labels. The percentages of white homemakers who looked for brand name, date of packaging, and grade were nearly double the percentages of colored homemakers who looked for these items.

Two-thirds of all homemakers reported a willingness to pay a premium for brand name eggs of consistently Grade A quality. Twenty per cent reported they would pay up to 10 cents per dozen above normal egg prices for brand name eggs, 31 per cent would pay from 10 to 14 cents per dozen, and 18 per cent would pay 15 cents or more. A fourth of the homemakers felt brand name and non-brand name eggs should sell for the same price, whereas 6 per cent did not express an opinion. More white than colored homemakers placed an added value on brand name eggs.

Nine per cent of the white homemakers reported no preference for egg size. Of the 91 per cent who looked for size, 69 per cent wanted large eggs, 27 per cent bought medium eggs, and 4 per cent preferred either small or extra large eggs. Twenty per cent of the colored homemakers had no size preference. Of the 80 per cent who looked for size, 83 per cent preferred large eggs, 13 per cent liked medium size, and 4 per cent wanted either small or extra large eggs. Pullet eggs had been used by 60 per cent of the colored and 54 per cent of the white homemakers. Half the colored and a quarter of the white homemakers bought pullet eggs because they cost less per dozen. Half the white homemakers used pullet eggs only when the retailer had no other size available. However, 15 per cent of the white homemakers preferred small eggs because their size made them suitable for young children or for divided recipes. Some homemakers believed pullet eggs were local eggs, hence more likely to be fresh. Slightly under half of the homemakers never bought pullet eggs. Their reasoning was that pullet eggs were no bargain if two small eggs were needed to replace one large one.

Shell color was important to two-thirds of the respondents. Forty-five per cent of the white and 80 per cent of the colored homemakers preferred brown eggs. Cartoned eggs were preferred by 81 per cent of all the homemakers. The 2 by 6 egg carton was preferred by 83 per cent of the homemakers who wanted eggs cartoned. Eleven per cent of the respondents liked the 3 by 4 egg carton, and the remainder had no preference because they did not store eggs in cartons. Fifty-eight per cent of the families had purchased the previous week's supply of eggs in cartons. Sixty-one per cent of the families purchased eggs at

retail food stores, and three-fourths of these families bought eggs in cartons. Farmers or peddlers, who sold eggs to 31 per cent of the families, used paper sacks for 55 per cent of their sales, cartons for 33 per cent, and miscellaneous containers for the remainder. Fifty-eight per cent of all eggs purchased were in cartons, 36 per cent were in paper sacks, and 6 per cent were packaged in boxes, baskets, or other containers. Twenty-one respondents had, at some previous time, purchased eggs in cartons with a transparent top. Most of these purchasers liked this type carton because shell color and egg appearance could be seen.

Attitudes About Marketing Eggs

Two-thirds of the homemakers had noticed a rise in egg prices from summer to fall, 1955. Fifty-seven per cent had paid between 55 and 69 cents a dozen for eggs at the last purchase, 17 per cent had paid 70 cents or more, 21 per cent had paid 54 cents or less, and 5 per cent had no idea as to price of the last eggs purchased. Two-fifths of the white and a fourth of the colored homemakers expressed a willingness to pay whatever was asked for eggs without limiting their use. A fourth of the homemakers said they would buy fewer eggs if the price went above 79 cents, while 17 per cent would curtail egg use if they had to pay over 69 cents. Fourteen per cent would pay over 80 cents, but were not willing to go much above that price. Seven per cent of the homemakers said they would pay no more than 59 cents a dozen. Egg prices in food stores at the time of the study averaged 61 cents a dozen. This pointed to the possibility that homemakers who preferred large eggs but bought by price alone would purchase smaller eggs or lower grades until prices dropped. Less than 3 per cent of the homemakers expressed an interest in buying eggs by the pound. Buying eggs by weight had never occurred to many homemakers.

Less than 10 per cent of the respondents objected to house-to-house selling of eggs by farmers; these largely because they were day-sleepers or were away during the day. About 43 per cent of all homemakers were willing to pay more for eggs delivered to their homes by farmers than for eggs purchased at regular retail outlets. Thirteen per cent of the colored and 8 per cent of the white homemakers thought eggs sold by farmers should cost less than the same size and grade in stores. Forty-nine per cent of the white and 44 per cent of the colored homemakers thought

eggs of equal size and quality sold by farmers and by retail stores should be identical in price.

Only 3 per cent of the homemakers expressed dissatisfaction with retailers of eggs. Most complaints from colored homemakers concerned their inability to get poor quality eggs replaced. White homemakers said they had found poor eggs in the past but not recently. A few housewives felt that some eggs appeared small in relation to the size classification shown on the carton. A fifth of the homemakers reported having had difficulties of some type with eggs. The majority of the difficulties reported by colored homemakers concerned the occasional purchase of poor quality eggs that could not be eaten. Of the white homemakers reporting difficulties, two-fifths said they had purchased eggs of too poor quality to be used, and a fifth said some eggs had runny whites or mottled yolks. A fourth mentioned finding blood or meat spots in eggs. Thin shells, objectionable odor or flavor of otherwise good quality eggs, and off-color yolks were minor objections mentioned by white homemakers.

There were virtually no complaints about the manner in which food stores displayed eggs. However, the food store survey showed that in some stores eggs were left in a crate on the floor until all were sold. Cartoned eggs had been stacked on top of meat cases above eye level so that brand and price could not be seen readily. In other instances, refrigerated eggs were displayed in vegetable cases. The homemaker's apparent satisfaction with egg display methods appeared to be a matter of habit rather than agreement with her retailer's merchandising habits. Eleven per cent of the respondents did not want the food store to refrigerate eggs. To some, refrigeration meant "cold-storage eggs," or "shipped-in eggs." Others felt the sweating of cold eggs affected the keeping quality after purchase. Some homemakers timed purchases to days when the store received deliveries of local eggs in order to be assured of fresh eggs. Virtually all homemakers refrigerated eggs in the home.

CONSUMPTION of EGGS by FAMILY MEMBERS

A little over half the homemakers stated that male adults should eat at least 2 eggs a day. Three-fourths of the white and half of the colored homemakers thought children and female adults should eat an egg a day. These opinions were consistent at all

income levels. A comparison was made of the homemaker's estimate of daily egg needs, by age and by sex, to the actual number used in each family the previous 7 days. White families were using only 84 per cent of the daily per capita standard suggested by homemakers. Colored families were using 49 per cent of the homemaker's estimate, and all families averaged only 75 per cent of this standard.

Home economists have planned a moderate-cost diet covering meals for a week that specifies 7 eggs per capita per week with two exceptions. For the exceptions, 6 eggs per week were provided for children 3 years old or under and for adults 60 years of age and over.⁸ Using this as a measure, white families used 12 per cent above the recommended number of eggs, while colored families used 17 per cent less in the study week. All families in the study used an average of 6 per cent above the minimum number of eggs recommended per person per week in the moderate-cost diet, when comparison was made as to the actual population of the study and the total eggs used by families.

About 70 per cent of all families had children under 20 years of age. Three-fourths of the homemakers in these families said male members of the family ate more eggs than the females. Also, in two-thirds of these families, adults ate more eggs than children. However, in a fourth of the colored and a fifth of the white families, children had eaten the larger part of the family egg supply. In all-adult families, males were the major egg consumers in 58 per cent of the cases, but females ate the larger number in 23 per cent. In the remainder of the families, there was no difference in egg consumption between sexes.

Homemakers reported on the frequency of eating eggs by each family member. Analysis was made by race, sex, and age to determine which persons might be expected to eat eggs regularly, infrequently, or never in recognizable form. Sixty-nine per cent of the family members ate eggs regularly, 27 per cent sometimes, while 4 per cent never ate eggs. Nearly 9 husbands out of 10 ate eggs regularly, but only 7 out of 10 homemakers. Six per cent of the homemakers, but only 1 per cent of the husbands never ate eggs. A larger percentage of adult males, other than husbands, and of adult females, other than homemakers, ate eggs regularly. More males of all ages, except colored teen-age boys, ate eggs regularly than did females of the same ages. Nearly half

⁸ "Rural Family Living." Human Nutr. Res. Br., A.R.S., U.S.D.A. March 1955.

TABLE 6. PERCENTAGE OF FAMILY MEMBERS EATING EGGS AT GIVEN FREQUENCIES, BY SEX AND AGE GROUPS, 629 FAMILIES, GADSDEN, ALABAMA, FALL, 1955

Person	Frequency of eating eggs		
	Nearly every day	Sometimes	Never
	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>
Husbands.....	87	12	1
Homemakers.....	69	25	6
Females¹			
1-5 years of age.....	68	29	3
6-12 years of age.....	63	35	2
13-15 years of age.....	52	45	3
16-19 years of age.....	63	34	3
20 years of age and over.....	72	22	6
Average of group.....	65	32	3
Males²			
1-5 years of age.....	73	21	6
6-12 years of age.....	68	27	5
13-15 years of age.....	79	21	0
16-19 years of age.....	70	25	5
20 years of age and over.....	90	9	1
Average of group.....	74	22	4
AVERAGE OF ALL FAMILY MEMBERS³	69	27	4

¹ Excluding homemakers.

² Excluding husbands.

³ Excluding guests, household help, and boarders.

the girls between 13 and 15 years of age seldom ate eggs. About 6 per cent of the male children, except teen-age boys 13 to 15 years of age, never ate eggs, Table 6.

In all age classifications except those of colored children 6 to 12 and colored girls 13 to 15 years of age, there were larger percentages of white than colored who ate eggs nearly every day. However, there were more white than colored persons who never ate eggs. Seventy-five per cent of the colored husbands and 62 per cent of the colored homemakers ate eggs nearly every day. Only about half the teen-age boys and the older teen-age girls in the colored families ate at least five eggs a week, Appendix Tables 4 and 5.

Reasons for Infrequent Egg Consumption

Homemakers in 197 homes and husbands in 77 homes, 31 and 13 per cent of the 629 homes, respectively, infrequently or never ate eggs. In 60 per cent of the 77 homes, neither husband nor wife ate eggs frequently. Homemakers in these cases gave iden-

tical reasons for both heads of the family failing to eat eggs regularly. Three-fourths of the 197 homemakers who seldom or never ate eggs said their husbands ate eggs nearly every day. Hence, these homemakers cooked eggs for someone in the family in most cases. Forty-eight per cent of the homemakers and 38 per cent of the husbands did not like the flavor of eggs in main dishes. The percentage of persons reporting specific reasons for infrequent consumption of eggs was as follows:

<i>Reason for infrequent consumption</i>	<i>Percentage</i>
Dislike flavor or appearance	45
Like variety in breakfast menus	32
Do not eat breakfast	7
Miscellaneous	16

SOURCES of INFORMATION ABOUT EGGS

One or more persons in 17 per cent of the families had received dietary information from doctors. In 48 per cent of these families, homemakers had been given diets containing eggs. About half of the diets were for weight reduction or improvement of general health, while the remainder were therapeutic or pregnancy food plans. Husbands in 25 families had been given therapeutic or general diets, whereas food schedules for infants and meal plans for anemic children made up the remainder of the prescribed diets. Doctors were the only direct source of information mentioned that caused more eggs to be used by families.

Two per cent of the respondents reported that they or members of their families had attended meetings where eggs were discussed. A few had attended club meetings, gone to cooking schools, or seen an egg exhibit at the county fair. Several daughters had been in home economics classes where they had learned about egg grades, buying eggs by the pound, and how to cook eggs properly.

Nine per cent of the colored and 3 per cent of the white homemakers had been asked by their children to boil, poach, or scramble eggs in ways that were new to these families. Children also influenced mothers to use eggs in salads, sandwiches, and milk beverages. New recipes containing eggs were most often obtained from friends by white homemakers, with cookbooks a close second source of ideas. Colored homemakers usually got new recipes

from relatives, but also used their own ideas or a cookbook to develop new ways of using eggs.

A total of 136 homemakers, or 22 per cent of the 629 respondents, remembered some type of advertising that mentioned eggs. Nearly half of them had seen it on television and of these, 59 per cent mentioned a specific cooking school program that demonstrated the proper way to boil and peel an egg. Most of the remaining homemakers who remembered a television program recalled a specific egg dish and may have had this, or a similar program, in mind. Several remembered an advertisement of an electric skillet that had featured ham and eggs. Radio was mentioned by only three homemakers who had heard the egg market quotations on farm programs.

A third of the 136 homemakers recalled reading about eggs in newspapers. About half had read items about the Alabama Shell Egg Law, egg production, or egg price data, while the remainder had seen advertisements or recipes containing eggs in the weekly food section of the local newspaper. A fifth of the respondents recalled advertisements in magazines that featured eggs with other foods, as well as specific recipes using eggs. Eleven per cent of the 136 homemakers had used recipes containing eggs; 50 per cent had obtained the recipes from a television program, 30 per cent had read the recipe in a newspaper, and the remaining 20 per cent had seen the recipe in a magazine.

Newspapers or magazines with food sections were read regularly by 79 per cent of the white and 58 per cent of the colored homemakers. Of these, 89 per cent of the white and 83 per cent of the colored families read the local newspapers. The remainder read newspapers from other cities. White families taking magazines with a food section averaged one magazine per family; colored families averaged one-half a magazine. White families read an average of 1.9 and colored families 1.3 magazines and newspapers with a food section. Forty-three per cent of the colored and 21 per cent of the white families did not regularly read newspapers or magazines with food sections.

Promotion of Eggs by Retail Food Stores

Retail food store owners or managers included in the study did little promotion of eggs and expressed a feeling that good eggs sold themselves. Their major concern was to find a wholesaler who could deliver Grade A eggs in adequate numbers when

needed. Fifteen of the 39 stores had advertised eggs. The eggs were usually listed along with other items in the store's advertisement in the weekly food section of the local paper. A card in the window or over the display was used if eggs were being sold at wholesale prices or below as part of the store's promotional program. Price was believed to be more important than advertising in selling eggs. However, the merchants felt that even a substantial drop in price would increase demand for only a short time.

Several food store managers said it was to their advantage to educate customers regarding egg quality descriptions. They believed informed buyers would purchase eggs on other than a price basis alone.

Gadsden is near one of Alabama's major egg producing areas. This, and other sources, gave the city access to an adequate supply of good quality eggs. Availability, as such, was not a limiting factor in family egg consumption. However, the absence of any organized promotional program to motivate the housewife to use more eggs may have meant that household use of eggs had not been maximized in the city.

FAMILY CHARACTERISTICS ASSOCIATED with USE of EGGS

In analyzing such individual characteristics as race, income, or education, it was not possible to relate these factors to cause or effect. However, the data indicate that some of the family characteristics studied were related to use of eggs by households. While virtually all families had used eggs, there were large variations between families in the number used during the study week. There was also a large variation in per capita egg consumption within families. Among the many reasons that might account for these wide variations were family habits, customs, likes, dislikes, and religion; climate, season of the year, and changes in temperature; family age distribution, income, expenditure for food, and frequency with which the family heads ate eggs; actual price of eggs, relative price of eggs, and extent of their promotion, as well as other factors such as sex or, to some extent, race.

A number of family characteristics were studied with respect to their influence on per capita use of eggs. Those most closely associated included the frequency with which the homemaker or the husband ate eggs, family age distribution, the amount of money spent per individual per meal, and the source from which

eggs were purchased. Per capita income and sex were also closely associated with egg use.

Frequency of Eating Eggs by Homemaker or Husband

It may seem almost too obvious to mention that the eating of eggs by homemaker or husband affects total family consumption, since each comprised about a fourth of the family. However, the frequency with which either the homemaker or the husband ate eggs affected the family average more than the weight of this one person. The homemaker's influence on per capita use of eggs by frequency of eating was as follows:

<i>Frequency of eating eggs by homemaker</i>	<i>Percentage of the average use</i>
Nearly every day	110
Sometimes	81
Never	74

When the homemaker did not eat an egg, her example may have influenced other family members to refrain from eating eggs. If she did not care for eggs, she may not have included them in planning family meals, especially breakfast. Husbands had a similar but less positive effect on egg consumption, Appendix Table 6. As has been mentioned, half of the diets containing eggs given to families by doctors were for the homemaker's benefit. A third of the homemakers infrequently ate eggs, though they may have served them to other family members.

Family Age Distribution

Per capita use of eggs tended to increase as age of the youngest family member increased. Families whose youngest member was less than a year old used the least eggs per capita. Families whose youngest child was in early adolescence used the most eggs per person. Families with all children under 12 years of age used fewer eggs than those that included some teenagers. However, the all-adult families, especially the colored families where family heads were over 40 years of age, were the largest per capita consumers of eggs as a group. Three-fourths of the colored families containing only adults used 6 eggs or more per person per week, and the number was greatest in the older families. Use of eggs also increased with age of homemaker and husband in white families. Those families where family heads were over 40 years of age

used more eggs than those where heads were below that age. This difference was probably related to the presence of children in younger families. Details on per capita egg consumption, by age groups of various family members, are shown in Appendix Tables 7 through 10.

Income, Size of Family, and Food Expenditures

Eggs are a popular, well-liked item purchased by consumers of all levels of income. Per capita use of eggs was not directly related to family income. There was no relationship between an increase in family income and greater use of eggs on a family or a per capita basis as is true for some commodities. Per capita egg use was slightly larger than average in very low income white families, low income colored families, and families with incomes over \$5,000 a year, Appendix Table 11. The amount of money spent per family per week for food used at home showed little relationship to per capita use of eggs, Appendix Table 12.

The amount of money spent for food per individual per week or per meal was, however, closely related to the number of eggs used on a per capita basis. Total food expenditures per family increased as income increased. As family size increased, per capita income, per capita meal cost, and per capita use of eggs decreased. Thus, size of family played an extremely important part in determining the disposition of family income and distribution of food dollars. Even though family income may be low, per capita income in small families may be relatively large, and meal cost on an individual basis equal to that of larger families with higher total family incomes. Regardless of income or size of family, families spent an average of 7.6 per cent of their food dollar for eggs. An increase in the amount spent per individual per meal for food was accompanied by an increase in per capita consumption of eggs, Appendix Tables 13 and 14.

This relationship of per capita income, per capita meal cost, and per capita use of eggs aids in understanding the larger per capita use of eggs in small families and in families containing only adults. It also explains, to some degree, the increase in per capita egg use with increasing age of the youngest family member, since the comparison is made on the basis of the importance of food in the family, rather than on the basis of total money available for family use.

Socio-Economic Scores

Socio-economic scores were closely associated with annual family income, especially in white families. Ownership of a television set showed no association with egg use per capita. Possession of radios and refrigerators was so universal that no relationship with egg use could be found. However, the families with very low incomes who used an ice refrigerator or had no refrigeration were large consumers of eggs. Colored families who owned an automobile were slightly below-average users of eggs. Above-average per capita use of eggs was found in families who owned a home freezer, took a daily paper, the homemaker read three or more newspapers or magazines with a food section (one or two in colored families), and all members over 6 years of age belonged to organizations other than church. The association of these items with above-average income, especially per capita income, and below-average size of family, probably explains their relationship to the use of more eggs per person in these families than in the average family. Increasing socio-economic scores were related to increasing amounts of money spent per week for the family food, but not to increasing amounts spent per individual per meal, which has been shown to be related to per capita egg use. Appendix Table 15 shows the relationship of socio-economic scores to per capita use of eggs.

Egg Buying Habits

Per capita egg consumption was greater than average among those families that bought eggs from sources other than food stores. Eggs were purchased at stores by 58 per cent of the white and 75 per cent of the colored families. Eighty per cent of the white and 70 per cent of the colored families who purchased eggs at places other than retail food stores bought eggs from farmers or peddlers. Colored families who purchased eggs only from farmers consumed 31 per cent more eggs per capita than the average colored person in the study. Colored families that had eaten only home produced eggs consumed about half the study average number of eggs per capita. When home produced eggs were supplemented with purchased eggs, these families used 42 per cent more than the per capita egg use in all colored families. In gen-

eral, the percentage per capita use of eggs for all families by place of purchase was as follows:

<i>Place of egg purchase</i>	<i>Percentage of the average use</i>
Retail food store	97
Farmer or peddler	109
Neighbor, relative, friend	116
Part of egg supply purchased	114
None purchased, supply on hand	79

For per capita use by race and place of purchase, see Appendix Table 16.

Families who liked eggs and who used them largely in breakfast main dishes were willing to take the trouble to seek the freshest eggs obtainable. They were willing to pay premium prices to get superior eggs. Many of these homemakers said a rise in egg prices, either a gradual or a sudden rise of 15 or more cents a dozen, would not cause curtailment of egg use. Per capita egg consumption in these families exceeded that of the average person in the study. Families who purchased eggs early in the week, especially colored families, used more than the average number of eggs per capita. Families who purchased more than 2 dozen eggs at a time, bought eggs several times a week, or had some eggs delivered to their homes were above-average users on a per person basis. However, these various egg buying traits of families served mainly to differentiate families who purchased eggs only from food stores from those who secured eggs from other sources, rather than distinguishing characteristics directly related to per capita use in households.

Housewives appeared more interested in securing good quality eggs than in the actual price of eggs. While a wide range existed in the price of eggs in the market, there was no appreciable difference in the per capita consumption based on prices paid by the housewife for the last eggs purchased. While some housewives expressed little concern over prices, others purchased lower grades or smaller size eggs in order to get a fixed number for a given sum of money. In this study, regardless of size or quality, an egg was counted as an egg in analysis of the data. This may have prevented price from showing as a factor affecting consumption. However, it seems safe to conclude that actual or relative egg prices were of minor importance in egg consumption for most families.

Other Influences on Egg Use

It has already been suggested that sex and race, to some extent, are related to the use of eggs by individuals. Males of all ages, except colored teen-age boys, ate eggs more often than did females of the same age. Even among males, a larger percentage of older than younger males were habitual egg consumers. White persons consumed slightly more eggs and ate them more regularly than did colored persons. When allowance was made for size of family and for income, there was no major difference in the per capita consumption of eggs by race.

A number of other family characteristics were examined with respect to possible influence on per capita use of eggs. Education of homemaker and husband, and occupation of the principal wage earner had no apparent relationship to per capita egg consumption. However, employment of the homemaker outside the home, especially if she worked at skilled labor, seemed to be associated with per capita egg use in these families. Families with two or more wage earners also used more eggs than families with one earner or none. If the housewife regularly made out a food shopping list or if she did all the food buying, there were more eggs than usual eaten per capita in her family. However, such traits were important only in that they more fully described the type of family that used a larger number of eggs rather than in indicating that there was an association with high use of eggs per capita.

SUMMARY and CONCLUSIONS

This report analyzed the effects of race, sex, family composition, income, occupation, food expenditures, and egg buying practices of households on per capita consumption of eggs in 509 white and 120 colored families in Gadsden, Alabama. Retail egg marketing services, kinds and sources of information, and consumer attitudes about eggs were also studied.

During the study week, white families consumed an average of 5.9 eggs per capita. Colored families used 5.2 eggs per capita, or 12 per cent less than white families. However, if size of family and income of the colored families were adjusted, consumption varied little between the races. Families as a whole consumed 6 per cent more eggs than were specified in a standard moderate-cost diet adjusted to the ages of the persons in the study. The

average family spent 7.6 per cent of its weekly home food expenditure for eggs.

Only 12 families did not use eggs during the study week. Ninety-eight per cent of the remaining 617 families used eggs in main dishes, such as fried or scrambled; 76 per cent of all eggs were consumed in this way. In winter, 91 per cent, and in summer, 86 per cent, of the families used eggs in breakfast main dishes. Eggs were mentioned by 79 per cent of the homemakers as a food their families should eat nearly every day. Only 12 per cent of the homemakers could recall using eggs in a new way the past year.

Three-fourths of the white and half of the colored families reported they were using all the eggs they wanted. It was their opinion that only a change in the number of family members would cause an alteration in the number of eggs purchased. Two-thirds of the white homemakers reported they would pay whatever price was asked for eggs without curtailing purchases. However, some homemakers would buy smaller sizes or lower grades of eggs to compensate for price rises. Homemakers whose families used larger numbers of eggs were more concerned with quality of eggs than with price.

Three-fifths of the families purchased all eggs from retail food stores. A third of the white and a fifth of the colored families bought eggs from farmers or peddlers, usually by standing orders. Three-fourths of the families purchased eggs only one day a week, usually along with other food items on Friday or Saturday. However, families who purchased eggs from places other than retail food stores, bought several times a week, or who bought more than 2 dozen at a time, were larger users of eggs.

Homemakers reported they looked for freshness, grade, and size when they shopped for eggs. Additional questioning brought out that a fifth looked for brand name, two-fifths checked for date of packaging, and three-fourths were aware of grade labels. Twice the percentages of white as colored homemakers looked for these quality descriptions. Two-thirds of the homemakers said they would pay a premium above the normal egg market price for brand name eggs of Grade A or higher quality.

Nine per cent of the white and 20 per cent of the colored homemakers did not look for size of eggs when shopping. Most colored homemakers wanted large eggs, but a fourth of the white homemakers preferred to buy medium eggs. Colored homemak-

ers who used pullet eggs did so because they cost less per dozen. Some homemakers purchased small eggs to feed to children or to use in divided recipes.

Brown eggs were preferred by 80 per cent of the colored homemakers and by 45 per cent of the white homemakers who shopped for egg color. Most of the 80 per cent of the homemakers who wanted eggs cartoned liked the 2 by 6 egg container. Three-fourths of the families who bought eggs at retail food stores purchased them in cartons. One-third of the families buying eggs from farmers purchased them in cartons.

Very few homemakers were dissatisfied with the marketing or display of eggs by retailers. One-fifth of the homemakers had gotten an occasional poor egg in the past, but had no current complaints about egg quality. Eleven per cent did not want eggs refrigerated since they felt such eggs were "shipped-in." However, nearly all homemakers refrigerated eggs after purchase.

Families composed only of adults used the most eggs per capita and those with children 12 years of age or under used the fewest, especially in colored families. Sixty-nine per cent of the family members ate eggs nearly every day, 27 per cent occasionally ate eggs, and 4 per cent never ate eggs. Males were the largest and most frequent consumers of eggs, and the percentage of male users increased with an increase in age. Dislike of flavor or appearance of eggs, or the desire for variety in breakfast menus, were the usual reasons given for infrequent consumption of eggs by heads of households.

Family characteristics closely associated with egg use were the frequency with which the homemaker and the husband ate eggs, family type and age distribution, size of family as it influenced per capita income, the amount spent per individual per meal for food, and the purchase of eggs at other than retail food stores. With a staple article of food such as eggs, education, occupation, and annual family income did not greatly influence egg use per capita. However, per capita egg use rose with an increase in per capita income and the amount spent for food per individual per meal. Small families spent more per individual per meal and used more eggs per capita, mainly because they were usually made up of adults and composed of older persons. Per capita egg use increased with an increase in age of the youngest family member.

Eggs were used by nearly all families, but there were wide

variations in per capita use between families and within families. The expected level of consumption had been reached in most white families and half the colored families. Price of eggs was most important to families of limited income, to careful buyers who watched food prices, or to families who were not large users of eggs. To all others, quality was much more important than current price. Since three-fourths of the eggs were used in main dishes, it was important to homemakers who used eggs mainly for breakfast that every egg be of high quality.

Expanded sales of eggs in urban areas depend on the egg industry solving two major problems. The first is to provide customers with adequate numbers of high quality eggs in the desired grades, sizes, and colors at reasonable prices. The second is to influence customers to take home an extra dozen eggs. This would require an expanded promotional program.

Eggs are eaten by almost everyone. The public in general does not need to be sold on the place of eggs in the family diet. However, females of all ages, especially adolescent girls and younger homemakers, are infrequent consumers of eggs. Income for some families, especially colored families, may be a limiting factor in household egg use. For those who buy eggs by price, the availability of lower grades and smaller sizes at prices that would enable larger purchases might provide an outlet for other than the best quality eggs. Present users of average numbers of eggs should be supplied with new ideas for use in meal planning, especially using eggs at meals other than breakfast, or in main dishes other than as fried or scrambled. Producers should use recommended production and marketing practices to ensure that every egg sold is of good flavor and quality, regardless of size, color, or price. More eggs can be sold as population increases, family income rises, and homemakers shift to nourishing foods that require a minimum of preparation. Various promotional methods should be used by the industry to remind customers of the many good qualities of eggs as food for families.

RECOMMENDATIONS

The individual egg producer can aid in increasing consumption by following practices that lead to the marketing of high quality eggs. Families who purchased eggs from farmers used more than those who bought eggs at retail food stores. It does not follow

that all families would use more eggs if they were purchased direct from producers. However, it does point out that families who like eggs, and eat more than the average family on a per capita basis, buy from producers because they believe that is the best way to get fresh eggs.

Enlarging the market for eggs in households will require the following efforts on the part of the egg marketing industry from egg producers to retail food stores: (1) provide the best quality eggs that can be produced and marketed at all seasons of the year at reasonable prices, and (2) use a promotion program that will motivate the low consuming individuals to eat more eggs. This includes younger women, adolescent white girls, and colored families containing young children or adolescent boys.

Based on the findings of this study, the egg industry could promote sales to households by the following methods:

(1) For market promotional purposes, efforts should be directed toward a larger egg use by present-user families; more specifically, to influence customers to buy another dozen eggs that will be handy in the refrigerator for use in new ways or in favorite dishes that may have been neglected.

(2) Some promotional efforts should be directed toward the person, particularly the colored homemaker, who shops without a food list and takes her husband with her to buy food. In-store advertising or use of labels on cartons might supply popular nutritional information, proper egg cookery methods, advertising material directed towards children, or other promotional material attractive to those not reached by the usual media.

(3) Newly married homemakers, homemakers who work outside the home, and homemakers looking for menu ideas are susceptible to egg promotion. They would be particularly interested in the convenience aspects of egg cookery, as well as the versatility of the egg to fit in with meal plans of all types, no matter what the time of day or season of the year. Emphasis on recipes for egg dishes is now concentrated around Easter, but should be promoted throughout the year.

(4) Food habits are changing due to the impact of scientific discoveries and their acceptance by the public. Eggs as a breakfast dish were popular in older families, but there was more limited use by families with younger children. It was not established if the shift to other foods for breakfast was a trend due to

the competition of other foods, especially those highly advertised, or if it was related to changing food attitudes as children mature. The fact remains that eggs for breakfast may be replaced by other foods unless prevented by action of the egg industry. Since some loss will continue to occur, eggs should be promoted for other meals for those people who do not eat them for breakfast.

(5) Informed buyers should be able to purchase eggs suitable for baking or other cookery at less cost than for Grade A large eggs, which are preferred for breakfast main dishes. Eggs of smaller size or lower grade might be purchased also by those who buy by price alone. Retail food store personnel have a unique opportunity to sell more eggs by giving customers facts about egg buying that would enable the homemaker to buy for specific purposes. Lower prices for Grade B medium eggs to be used in quick breads or cakes might stimulate purchase of another dozen beyond the Grade A large eggs for breakfast, if housewives were aware of the advantages.

(6) The use of brand names, if backed by Grade A quality and sufficient volume, might be effective in satisfying housewives who demand the best and are willing to pay for this superior merchandise. A third of the homemakers would put no ceiling on what they would pay for eggs if they were Grade A or better.

(7) Eggs are a preference item for breakfast. In order to reach the breakfast table at optimum flavor and appearance, eggs at all stages from producer to consumer must be properly handled. Homemakers who were more interested in freshness than in cost of eggs bought from farmers to get the freshest eggs possible. Regardless of the retail source used, the housewife should have the same confidence in the eggs purchased.

(8) The best efforts in promotional and educational work will result only when each producer is interested enough to cooperate with other producers in a concerted attack on the problems of providing the market with high grade eggs and of informing consumers of the superior qualities of eggs as a food for every family.

APPENDIX

APPENDIX TABLE 1. DESCRIPTION OF FAMILIES IN THE SAMPLE, BY RACE, 629 FAMILIES, GADSDEN, ALABAMA, FALL, 1955

Item	Percentage of families, by item		
	White <i>Per cent</i>	Colored <i>Per cent</i>	All families <i>Per cent</i>
Age of male head of house:			
Under 40 years.....	44	30	41
40 years and over.....	56	70	59
Age of homemaker:			
Under 40 years.....	53	50	52
40 years and over.....	47	50	48
Family type:			
All children 12 years and under.....	40	33	39
All children 19 years and under.....	30	39	31
All members 20 years and over ¹	30	28	30
Age of youngest family member:			
Under 6 years.....	37	44	38
6-12 years.....	20	14	19
13-19 years.....	14	14	14
20 years and over ²	29	28	29
Annual family income, <i>dollars</i> :			
Below 2,000.....	7	23	11
2,000-4,000.....	32	60	37
4,001-7,500.....	50	16	43
Over 7,500.....	11	1	9
Source of income:			
Skilled, semi-skilled labor.....	60	25	53
Unskilled labor, domestic service.....	7	67	19
Professional, self-employed.....	17	2	14
Clerical, sales work.....	9	0	7
Income not from work.....	7	6	7
Homemaker's employment:			
Not gainfully employed.....	75	69	74
Domestic service.....	4	30	9
Clerical or sales.....	9	0	7
Factory work.....	9	0	7
Other.....	3	1	3
Number of wage earners:			
None.....	5	3	5
One.....	64	53	62
Two.....	27	37	28
Three or more.....	4	7	5

¹ Teen-age wives counted as adults.² Teen-age wives based on actual age.

APPENDIX TABLE 2. FOOD PURCHASING HABITS AND EXPENDITURES DURING SEVEN DAYS PREVIOUS TO INTERVIEW, BY RACE, 629 FAMILIES, GADSDEN, ALABAMA, FALL, 1955

Item	Percentage of families, by item		
	White	Colored	All families
	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>
Food buying habits:			
Personal shopping.....	93	98	94
Telephone.....	3	1	3
Both methods.....	4	1	3
Family food buyers:			
Wife alone.....	53	40	51
Wife and husband together.....	25	31	26
Husband alone.....	13	22	15
Other family members.....	9	7	8
Use of food shopping lists:			
Always.....	20	13	19
Usually.....	24	17	22
Sometimes.....	19	18	19
Never.....	37	52	40
Food expenditure per family per week, dollars:			
Under 10.00.....	2	21	6
10.00-15.99.....	29	36	30
16.00-20.99.....	24	22	24
21.00-25.99.....	22	12	20
26.00 and over.....	23	9	20
Food expenditure per person per week, dollars:			
Under 3.00.....	21	38	24
3.00-4.99.....	39	42	40
5.00 and over.....	40	20	36
Food expenditure per person per meal, cents:			
Under 20.....	12	56	21
20-29.....	36	27	34
30-39.....	30	12	26
40 and over.....	22	5	19

APPENDIX TABLE 3. PERCENTAGES OF FAMILIES WITH ITEMS INCLUDED IN THE SOCIO-ECONOMIC SCALE BY RANGE IN SOCIO-ECONOMIC SCORE, BY RACE, 629 FAMILIES, GADSDEN, ALABAMA, FALL, 1955

Range in socio-economic scores	Items included in socio-economic scale												
	Tele- vision	Radio	Tele- phone	Home freezer	Refrigerator		Auto, truck	Newspaper		Food section		Family participation	
					Electric, gas	Ice		Daily	Weekly	3 or more	1 or 2	All	Part
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
509 white families													
0-3.....	0	75	0	0	25	50	0	0	0	0	25	0	0
4-6.....	16	90	6	0	100	0	32	23	0	0	0	0	0
7-10.....	43	89	37	3	99	0	70	75	0	5	44	0	0
11-14.....	84	97	86	2	100	0	95	98	1	15	72	9	36
15-18.....	98	100	100	38	100	0	100	100	0	55	43	47	42
AVERAGE OF WHITE FAMILIES.....	75	96	75	10	98	1	87	89	1	21	56	15	30
120 colored families													
0-3.....	0	100	0	0	0	100	0	0	0	0	0	0	0
4-6.....	3	83	28	0	72	21	31	21	3	0	28	0	14
7-10.....	37	96	33	2	91	8	48	63	10	0	54	2	27
11-14.....	84	100	84	16	100	0	76	92	3	0	76	2	53
15-18.....	100	100	100	75	100	0	100	100	0	0	100	25	50
AVERAGE OF COLORED FAMILIES.....	46	94	50	8	88	9	54	62	6	0	56	3	32

APPENDIX TABLE 4. PERCENTAGE OF FAMILY MEMBERS EATING EGGS AT GIVEN FREQUENCIES BY SEX AND AGE GROUPS, 509 WHITE FAMILIES, GADSDEN, ALABAMA, FALL, 1955

Person	Frequency of eating eggs		
	Nearly every day	Sometimes	Never
	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>
Husbands.....	90	9	1
Homemakers.....	70	24	6
Females¹			
1-5 years of age.....	72	25	3
6-12 years of age.....	63	35	2
13-15 years of age.....	45	50	5
16-19 years of age.....	67	30	3
20 years of age and over.....	75	19	6
Average of group.....	66	30	4
Males²			
1-5 years of age.....	76	20	4
6-12 years of age.....	64	29	7
13-15 years of age.....	87	13	0
16-19 years of age.....	77	17	6
20 years of age and over.....	92	6	2
Average of group.....	76	20	4
AVERAGE OF ALL WHITE PERSONS ³	76	20	4

¹ Excluding homemakers.

² Excluding husbands.

³ Excluding guests, household help, and boarders.

APPENDIX TABLE 5. PERCENTAGE OF FAMILY MEMBERS EATING EGGS AT GIVEN FREQUENCIES BY SEX AND AGE GROUPS, 120 COLORED FAMILIES, GADSDEN, ALABAMA, FALL, 1955

Person	Frequency of eating eggs		
	Nearly every day	Sometimes	Never
	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>
Husbands.....	75	25	0
Homemakers.....	62	33	5
Females¹			
1-5 years of age.....	57	41	2
6-12 years of age.....	68	32	0
13-15 years of age.....	64	36	0
16-19 years of age.....	55	45	0
20 years of age and over.....	63	33	4
Average of group.....	61	38	1
Males²			
1-5 years of age.....	66	23	11
6-12 years of age.....	80	20	0
13-15 years of age.....	57	43	0
16-19 years of age.....	46	54	0
20 years of age and over.....	83	17	0
Average of group.....	69	27	4
AVERAGE OF ALL COLORED PERSONS ³	67	31	2

¹ Excluding homemakers.

² Excluding husbands.

³ Excluding guests, household help, and boarders.

APPENDIX TABLE 6. AVERAGE NUMBER OF EGGS USED PER CAPITA PER WEEK AND PERCENTAGE OF AVERAGE USE BY FREQUENCY OF EATING EGGS BY HEADS OF HOUSEHOLDS, BY RACE, 629 FAMILIES, GADSDEN, ALABAMA, FALL, 1955

Frequency of eating eggs	509 white families		120 colored families	
	Average per capita egg consumption	Percentage of average use	Average per capita egg consumption	Percentage of average use
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>
Homemakers				
Nearly every day.....	6.4	108	6.2	119
Sometimes.....	5.1	86	3.7	71
Never.....	4.4	75	3.5	67
Husbands				
Nearly every day.....	6.1	103	5.9	113
Sometimes.....	4.3	73	3.3 ¹	63 ¹
Never.....	4.1	69		
AVERAGE.....	5.9	100	5.2	100

¹ No colored families in this group.

APPENDIX TABLE 7. AVERAGE NUMBER OF EGGS USED PER CAPITA PER WEEK AND PERCENTAGE OF AVERAGE USE BY AGE OF YOUNGEST MEMBER OF FAMILY, BY RACE, 629 FAMILIES, GADSDEN, ALABAMA, FALL, 1955

Age of youngest member of family	509 white families		120 colored families	
	Average per capita egg consumption	Percentage of average use	Average per capita egg consumption	Percentage of average use
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>
Under 1 year.....	4.4	75	3.5	67
1-5 years.....	5.7	97	4.4	85
6-12 years.....	5.9	100	5.5	106
13-15 years.....	6.9	117	4.7	90
16-19 years.....	6.4	108	5.6	108
20 years and over.....	6.5	110	8.9	171
AVERAGE.....	5.9	100	5.2	100

APPENDIX TABLE 8. AVERAGE NUMBER OF EGGS USED PER CAPITA PER WEEK AND PERCENTAGE OF AVERAGE USE BY FAMILY TYPE, BY RACE, 629 FAMILIES, GADSDEN, ALABAMA, FALL, 1955

Family type	509 white families		120 colored families	
	Average per capita egg consumption	Percentage of average use	Average per capita egg consumption	Percentage of average use
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>
All children 12 years of age and under.....	5.5	93	4.3	83
All children 19 years of age and under.....	6.1	103	4.7	90
Adults only.....	6.4	108	9.0	173
AVERAGE.....	5.9	100	5.2	100

APPENDIX TABLE 9. AVERAGE NUMBER OF EGGS USED PER CAPITA PER WEEK AND PERCENTAGE OF AVERAGE USE BY AGE OF HOMEMAKER, BY RACE, 629 FAMILIES, GADSDEN, ALABAMA, FALL, 1955

Age of homemaker	509 white families		120 colored families	
	Average per capita egg consumption	Percentage of average use	Average per capita egg consumption	Percentage of average use
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>
Under 20 years.....	5.4	92	5.5	106
20-39 years.....	5.6	95	4.4	85
40-59 years.....	6.2	105	6.2	119
60 years and over.....	6.6	112	6.6	127
AVERAGE.....	5.9	100	5.2	100

APPENDIX TABLE 10. AVERAGE NUMBER OF EGGS USED PER CAPITA PER WEEK AND PERCENTAGE OF AVERAGE USE BY AGE OF HUSBAND, BY RACE, 629 FAMILIES, GADSDEN, ALABAMA, FALL, 1955

Age of husband	509 white families		120 colored families	
	Average per capita egg consumption	Percentage of average use	Average per capita egg consumption	Percentage of average use
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>
Under 40 years.....	5.5	93	4.3	83
40-59 years.....	6.2	105	5.5	106
60 years and over.....	6.6	112	7.5	144
AVERAGE.....	5.9	100	5.2	100

APPENDIX TABLE 11. AVERAGE NUMBER OF EGGS USED PER CAPITA PER WEEK AND PERCENTAGE OF AVERAGE USE BY ANNUAL FAMILY INCOME, BY RACE, 629 FAMILIES, GADSDEN, ALABAMA, FALL, 1955

Annual family income	509 white families		120 colored families	
	Average per capita egg consumption	Percentage of average use	Average per capita egg consumption	Percentage of average use
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>
<i>Dollars</i>				
Under 500.....	4.1	69	0	0
500-999.....	7.2	122	6.2	119
1,000-1,499.....	6.6	112	3.5	67
1,500-1,999.....	6.0	102	8.4	162
2,000-2,499.....	5.9	100	4.4	85
2,500-2,999.....	6.0	102	4.6	88
3,000-3,499.....	5.4	92	5.0	96
3,500-3,999.....	6.2	105	5.6	108
4,000-4,999.....	5.7	97	8.6	165
5,000-7,499.....	6.0	102	4.8	92
7,500 and over.....	6.2	105	8.2	158
AVERAGE.....	5.9	100	5.2	100

APPENDIX TABLE 12. AVERAGE NUMBER OF EGGS USED PER CAPITA PER WEEK AND PERCENTAGE OF AVERAGE USE BY THE FAMILY WEEKLY FOOD EXPENDITURE, BY RACE, 629 FAMILIES, GADSDEN, ALABAMA, FALL, 1955

Family weekly food expenditure	509 white families		120 colored families	
	Average per capita egg consumption	Percentage of average use	Average per capita egg consumption	Percentage of average use
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>
<i>Dollars</i>				
Under 10.....	6.2	105	5.5	106
10.00-15.99.....	5.2	88	5.9	113
16.00-20.99.....	6.7	114	5.0	96
21.00-25.99.....	6.1	103	5.5	106
26.00 and over.....	5.8	98	3.8	73
AVERAGE.....	5.9	100	5.2	100

APPENDIX TABLE 13. AVERAGE NUMBER OF EGGS USED PER CAPITA PER WEEK AND PERCENTAGE OF AVERAGE USE BY SIZE OF HOUSEHOLD (STANDARDIZED TO 21 MEALS PER PERSON PER WEEK), BY RACE, 629 FAMILIES, GADSDEN, ALABAMA, FALL, 1955

Size of household by number of people	509 white families		120 colored families	
	Average per capita egg consumption	Percentage of average use	Average per capita egg consumption	Percentage of average use
	Number	Per cent	Number	Per cent
Under 2.0.....	7.5	127	7.4	142
2.0-2.9.....	6.4	108	8.1	156
3.0-3.9.....	5.8	98	5.4	104
4.0-4.9.....	5.4	92	5.4	104
5.0-5.9.....	5.7	97	3.9	75
6.0 and over.....	5.5	93	4.3	83
AVERAGE.....	5.9	100	5.2	100

APPENDIX TABLE 14. AVERAGE NUMBER OF EGGS USED PER CAPITA PER WEEK AND PERCENTAGE OF AVERAGE USE BY FOOD EXPENDITURE PER INDIVIDUAL PER MEAL, BY RACE, 629 FAMILIES, GADSDEN, ALABAMA, FALL, 1955

Food expenditure per individual per meal for one week	509 white families		120 colored families	
	Average per capita egg consumption	Percentage of average use	Average per capita egg consumption	Percentage of average use
	Number	Per cent	Number	Per cent
Under 10 cents.....	1.7	29	3.1	60
10-19 cents.....	5.2	88	4.8	92
20-29 cents.....	5.9	100	5.8	112
30-39 cents.....	6.1	103	7.2	138
40-49 cents.....	6.1	103	9.2	177
50 cents and over.....	7.5	127	7.2	138
AVERAGE.....	5.9	100	5.2	100

APPENDIX TABLE 15. AVERAGE NUMBER OF EGGS USED PER CAPITA PER WEEK AND PERCENTAGE OF AVERAGE USE BY RANGE IN SOCIO-ECONOMIC SCORE, BY RACE, 629 FAMILIES, GADSDEN, ALABAMA, FALL, 1955

Socio-economic score	509 white families		120 colored families	
	Average per capita egg consumption	Percentage of average use	Average per capita egg consumption	Percentage of average use
	Number	Per cent	Number	Per cent
8 or less.....	5.4	92	4.5	87
9-11.....	6.0	102	6.4	123
12-14.....	5.9	100	5.4	104
15 or more.....	6.2	105	6.0	115
AVERAGE.....	5.9	100	5.2	100

APPENDIX TABLE 16. AVERAGE NUMBER OF EGGS USED PER CAPITA PER WEEK AND PERCENTAGE OF AVERAGE USE BY SOURCE OF EGG PROCUREMENT, BY RACE, 629 FAMILIES, GADSDEN, ALABAMA, FALL, 1955

Source of egg procurement	509 white families		120 colored families	
	Average per capita egg consumption	Percentage of average use	Average per capita egg consumption	Percentage of average use
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>
Retail stores.....	5.7	97	5.0	96
Farmers, peddlers.....	6.3	107	6.8	131
Other ¹	6.5	110	18.0	346
Combination ²	6.4	108	7.4	142
None purchased ³	5.3	90	2.5	48
AVERAGE.....	5.9	100	5.2	100

¹ Purchases made from neighbors, friends, or relatives.

² Home produced or gift eggs supplemented by purchased eggs.

³ Eggs from home production or carried over from period before week of survey.