

Consumer Preferences for

Dairy Products and Services

in Small City Markets

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Summary and Conclusions

The study reported by this bulletin concerns consumer preferences for dairy products and services in the small city markets of Oklahoma. Specific objectives were (1) to determine present purchases of milk and milk products as related to family size and income level, (2) to determine consumer preferences for the types of services attached to fluid milk, and (3) to compare the purchases and preferences in the small city markets with purchases and preferences in a large city market.

Researchers interviewed 533 households in the two cities of Perry and Bristow, Oklahoma. These cities were located at the fringe of the two largest Oklahoma milksheds.

Fresh fluid milk was used by 93 percent of the sample households in the small city market. Consumption increased as families had more income or were larger in size. Weekly average consumption by households in the small city market was slightly less than in Oklahoma City but incomes also were lower. For given income levels, consumption averaged about one-half quart per week higher in the small city market than in Oklahoma City. Males drank more milk than females.

Changes in the price of milk would affect the milk consumption of one-fourth to one-third of the households. Changes in the richness of milk would affect the consumption of about one-tenth of the households. There was some evidence that increasing the richness of milk might lead to decreased consumption if consumers were cognizant of the change.

Cream was used by about one-sixth of the families and consumption averaged only 0.3 half pint per week. Buttermilk was used by about one-third of the families and consumption was about the same regardless of family size or income level. Chocolate milk was used by less than one-tenth of the families.

Canned milk and powdered milk were used by families of all sizes and income levels. There was a tendency for the lower income families to use the greatest quantities of these products. However, there was less difference in consumption of canned and powdered milk as related to income in the small city market than in Oklahoma City.

The consumption of frozen desserts (including ice cream) averaged 1.6 quarts per family per week which was about 70 percent greater than in Oklahoma City. However, a higher consumption rate was expected since the survey in the Perry market was conducted during September. For surveys conducted during the same season of the year, consumption

averaged about 10 percent higher in the Bristow market than in Oklahoma City market. Ice milk was much more important in the small city market than in the Oklahoma City market.

Few families used butter exclusively. About 23 percent of all tablespreads consumed was butter; the remainder was oleomargarine. Both butter consumption and oleomargarine consumption were related to family size and income level.

About twice as many families preferred to get milk at the grocery store as preferred home delivery. This was a greater preference for store purchases than in Oklahoma City. About one-third of the families preferred to get milk three times a week and about the same number preferred to get milk more often than this.

Paper containers were preferred over glass containers by the majority of the households. The paper container was least preferred on the delivery route.

The preference for size of container depended on the quantity of milk used. Larger container sizes were preferred when consumption was relatively large.

Consumer Preferences For Dairy Products and Services In Small City Markets

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This bulletin reports a study of consumer preferences for dairy products and services in small city milk markets of Oklahoma. A previous study concerned consumption and preferences of households in Oklahoma City which represented a large city market.*

The cities of Perry and Bristow, Oklahoma were selected as representative of this small city market. These cities had similar population and income structures and had total populations between 5,000 and 10,000 persons. In addition, each city was located at the periphery of a major Oklahoma milkshed.

The objectives of the study of the small city market were:

- (1) To determine present purchases of milk and milk products as related to family size and family income.
- (2) To determine consumer preferences for the types of services attached to fluid milk (such as place of purchase, frequency of purchase, and type and size of container) as related to family income and family size.
- (3) To determine the similarity and differences of purchases and preferences in the small city market as compared with the large city market.

The procedures used in this study were similar to those used in the Oklahoma City study. Personal interviews with housewives were obtained from a random sample of households in each city. A total of 533 households were included in the study with 251 from Perry and 282 from Bristow. All estimates of consumption are based on quantities consumed during the seven days prior to the interview.

*Leo V. Blakley, L. Don McMullin, and Kenneth B. Boggs, *Consumer Preferences for Dairy Products and Services in Oklahoma City*, Oklahoma Agricultural Experiment Station Bulletin No. B-464, November, 1955.

Only information from the combined small city market is reported in this study. Specific information in tabular form for either Bristow or Perry is available upon request.

Consumption of Milk and Cream

Fresh Fluid Milk

Consumption. About 93 percent of the households in the Perry-Bristow market used fresh fluid milk (Table 1). These households consumed an average of 8.8 quarts of fresh fluid milk during the seven-day period prior to the interview. The consumption for all families (users and non-users) averaged 8.2 quarts per week.

Practically all households used fresh fluid milk except those with annual incomes below \$1,000 (Table 2). Only 74 percent of the lowest income families used fresh fluid milk and consumption averaged about 3.0 quarts per week.

The consumption of fresh fluid milk varied directly with income. However, there was a tendency for milk consumption to level out for families with incomes above \$4,800 per year. Consumption averaged 11.5 quarts per week for families with incomes \$6,000 and over as compared with 11.1 quarts for families in the \$3,600 to \$4,799 income bracket.

Consumption also increased with family size up to 7 or more members. Each additional family member added from 2 to 4 quarts per week to the family consumption. However, families with seven or more members had an average consumption of 16.3 quarts per week which was smaller than for five to six member families. On a per capita basis, consumption for the large families averaged one-third less than for small families, primarily because of lower per capita incomes.

Prices. About two-thirds of the households using fresh fluid milk said they would not consume less milk even if the price increased by 10 cents per quart. The percentage varied from 55 to 63 for families with incomes up to \$6,000 per year but increased to 81 for families with incomes \$6,000 and over. The willingness to buy less milk because of higher prices increased with family size. About 70 percent of family size one said they would not change as compared with 47 percent for the

largest family sizes. Approximately 25 percent of the households indicated that they would use some less milk if the price of milk increased 5 cents per quart.

For lower prices, only about 28 percent of the households said they would buy additional milk even if the price decreased 10 cents per quart. Most households stated that their present requirements were being fulfilled. From 25 to 50 percent of the large size and small income families indicated that they would consume more milk in response to lower prices. About 18 percent of all households said they would use more milk for a price reduction of five cents per quart.

Opinions on Richness. Most of the households were satisfied with the richness of the milk they were using. The 8.2 percent who were not satisfied, in most cases, preferred more butterfat in their milk. These households were primarily in the lower income groups and one middle income group. Families with annual incomes of \$3,600 to \$4,799 had the highest percentage of households dissatisfied with richness of the milk they were using (14 percent). The next largest percentages were in families with annual incomes below \$2,400. Generally, only about one-half of the families preferring a richer milk said they were willing to pay extra for it.

If fresh fluid milk were made richer, about four percent of the respondents said they would use more milk, 73 percent would use the same, and seven percent would use less (Table 3). No answers were obtained from 16 percent of the respondents.

About 50 percent of the respondents thought that the butterfat content should be marked on the outside of the milk container. About 29 percent of the respondents did not want or desire such labeling. The remaining respondents were indifferent as to labeling of the butterfat content of milk.

Fresh Fluid Cream

Fresh fluid cream was used by only 15 percent of the households in the small city survey (Table 1). Whipping cream and half and half were most popular. About six percent of the households used an average of 2.0 half pints of whipping cream per week. For half and half, six percent of the households used an average of 2.6 half pints per week. Only three percent of the households used coffee cream.

Based on all households in the survey, consumption averaged 0.3 half pint per week for the total of whipping cream, coffee cream, and

half and half. Cream consumption tended to increase with income after annual incomes reached \$4,800 (Table 2). There was little relation between family size and cream consumption.

Buttermilk

Over one-third of the households used buttermilk. These households used an average of 1.7 quarts per week. For all households in the survey, consumption averaged 0.6 quart per week (Table 1).

The buttermilk consumption was about the same for all income groups and family sizes (Table 2). The largest amount of buttermilk was used in family size 7 and over but the smallest amount was used by family size 5 and 6. About 64 percent of all buttermilk was used for drinking.

Chocolate Milk

Chocolate milk was used by only 6 percent of the households and consumption averaged 0.1 quart per week (Table 1). There was some tendency for consumption to increase with larger families and higher income families. However, the consumption rate was very low for all families.

Canned Milk

About 57 percent of the households used canned milk. These households used about 3.0 cans during the week prior to the interview. For all households in the survey, consumption averaged 1.7 cans per week (Table 1).

The total use of canned milk increased with family size. Consumption increased from 0.6 can per week for one member families to 4.1 cans for the seven or more member families. The per capita consumption was about the same in each family size.

For a given family size there was a tendency for canned milk consumption to decrease as income increased. For example, in family size 5 and 6 the consumption decreased from 4.6 cans per week for families with incomes from \$1,000 to \$2,399 to 0.6 can per week for families with incomes of \$6,000 and over.

About half of all canned milk was filled milk. Filled milk was used by families of all sizes and all income groups. However, there was some tendency for consumption of filled milk to decrease as income increased. Filled milk represented about 42 percent of the canned milk used by high

income families as compared with 61 percent for families with annual incomes of \$1,000 to \$2,400. Also there was a tendency for medium to large size families to use less filled milk. The highest percentage of filled milk (73) was used by family size 2 while the lowest percentage (31) was used by family size 4.

About 16 percent of all canned milk was used for drinking, 21 percent was used for cereals and coffee, and 63 percent was used for cooking and other purposes. Low cost and other reasons (including the use for a baby formula) were the principal reasons given for the use of canned milk for drinking (Table 4). For cereals, coffee, cooking and other purposes, the most important reasons given were low cost and a substitute for cream. Together these reasons accounted for 57 percent of the reasons given. Other frequent reasons given for the preference for canned milk were that recipes called for it and ease of storage or use as a reserve.

Powdered Milk

One-fourth of the households used powdered milk. These households consumed an average of 2.8 quarts equivalent per week. For all households, consumption averaged 0.7 quart equivalent per week (Table 1).

Family size appeared to have no effect on aggregate consumption except for the largest family size (Table 2). Consumption by the largest family size averaged at least three times as great as for other family sizes. Powdered milk consumption was inversely related to income. Families with annual incomes below \$1,000 used an average of 1.0 quart equivalent. This consumption decreased with additional income to 0.4 quart equivalent per week for families with incomes \$6,000 and over.

Four out of every 10 families using powdered milk used it for drinking. Low cost and fewer calories were the most important reasons given for the use of powdered milk rather than fresh whole milk. These two reasons represented 64 percent of all reasons given for this preference (Table 5). When asked why they preferred powdered milk over fresh skim milk, the principal reasons given were low cost and never used skim milk.

About 69 percent of all powdered milk was used for purposes other than drinking. Low cost and use as a reserve were the most frequent reasons given for these uses.

When users of powdered milk were questioned about relative nutritional values, 32 percent thought it had less protein and mineral value

than whole milk, 28 percent thought it had the same value, and 40 percent did not know. For the non-users, 24 percent thought powdered milk had less protein and mineral value than fresh whole milk, 18 percent thought it had the same, and 57 percent did not know. The major difference between users and non-users in this case was the percentage who did not know the nutritional value.

About 65 percent of the users of powdered milk and 40 percent of the non-users had no objection to using powdered milk. Of those households expressing objections, about 44 percent objected because of taste. This was the same for both users and non-users. Other objections expressed were mixing problems, inconvenient, looks thin, and less nutritive value.

Total Milk

An estimate of total milk consumption was obtained by adding the consumption of fresh fluid milk, fresh fluid cream, buttermilk, canned milk, and powdered milk for each family size, income level classification. On this basis, 11.5 quarts equivalent were consumed each week in the small city market (Table 2).

Consumption of all milk at 6.8 quarts equivalent was lowest for families with less than \$1,000 annual income. However, the difference in consumption between low income families and high income families for all milk was less than the difference in consumption for fresh fluid milk. This indicates the extent to which low income families substituted lower cost dairy products, such as canned milk and powdered milk, for the fresh milk.

Consumption increased with increasing income up to the \$4,800 income level where 14.4 quarts equivalent were consumed. For higher income levels, consumption leveled out or increased slightly. Families with incomes \$6,000 and over consumed almost 15 quarts equivalent which was the highest rate of consumption.

Total milk consumption increased directly with family size. Consumption averaged 4.7 quarts equivalent for one member families and increased to 24.6 quarts equivalent for families with seven or more members.

About 60 percent of total milk consumption was used for drinking. Separate estimates of glasses of milk drunk per day by individuals were

obtained in order to analyze consumption by age and sex of household members. Since the size of these glasses varied between families and sometimes within families, a procedure was used to have estimates of the number of 5 1/3 ounce glasses drunk by each individual.

Both age and sex were related to the number of glasses drunk per day (Figure 1). For females, the number of glasses drunk per day declined each year through age 20. The decline was 0.11 glass for each year past one year of age. By age 20, the consumption by females averaged about 1.3 glasses per day as compared with 3.3 glasses at age one.

For males, the number of glasses drunk per day remained essentially unchanged for ages 1 through 20 years at 2.7 to 3.5 glasses per day. The slight increase, as shown, was not statistically significant. In the Perry market alone, an upward trend in milk consumption was found for males from ages 1 through 20 but this was the only market for which such an upward trend was statistically significant.

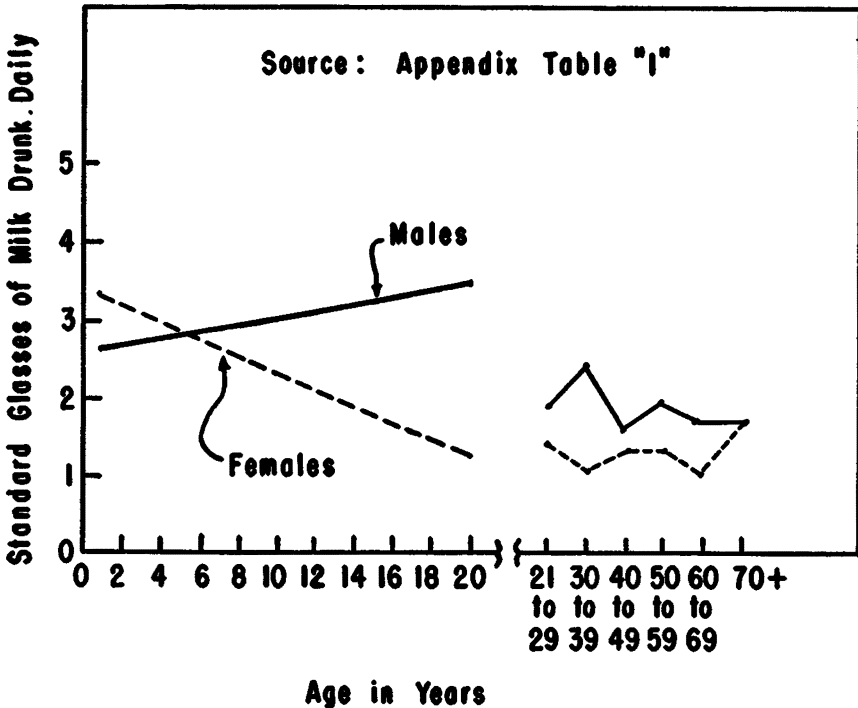


Fig. 1—Standard Glasses of Milk Drunk Daily by Perry and Bristow Consumers, survey weeks, 1955-1956.

After age 20, milk drinking leveled out for females and declined for males. Generally, males continued to drink from 0.3 to 1.3 glasses more milk per day than females. After age 70, both groups tended to consume the same amount of milk and consumption averaged 1.7 glasses per day. This was an increase in the later years for females but no change for males.

Consumption of Selected Products

Cottage Cheese

About 62 percent of the households used cottage cheese (Table 6). During the week prior to the interview, these households used an average of 1.7 cartons (12 ounce) per week. Cottage cheese consumption averaged 1.0 cartons for all households and tended to vary directly with family size and income level (Table 7). The smallest amount, 0.4 carton, was used in family size 1. The largest amount, 1.5 cartons, was used in family size 7 and over. Essentially the same relationships were evident for the low and high income families.

Frozen Desserts

About 1.6 quarts of frozen desserts (ice cream, ice milk and mello-rine type products) were consumed weekly in the small city market (Table 6). About 41 percent of all frozen desserts consumed was ice milk, a low fat dairy product. About one-fourth of all households used ice milk. For all households, an average of 0.7 quart per week was consumed (Table 6). The consumption of ice milk was greatest in the middle income families and smallest in both low and high income families (Table 7). Total ice milk consumption increased with family size but decreased on a per capita basis for the larger families.

Ice cream was next in importance. Ice cream represented 36 percent of all frozen desserts consumed and was used by one-third of the families. Households using ice cream consumed 3.1 pints per week but for all households, consumption averaged 1.2 pints per week (Tables 6 and 7). The consumption of ice cream varied directly with income. Families with incomes below \$2,400 consumed about 0.8 pint per week as compared with about 1.8 pints per week for families with incomes \$4,800 and over. By family size, consumption was lowest for one and two member families.

Mellorine was used by 16 percent of the households at an average rate of 2.4 quarts per week (Table 6). The rate was only 0.4 quart per week for all families. Consumption increased with additional income up to \$4,800 per year then decreased with additional income (Table 7). Consumption varied directly with family size. Families with incomes of \$3,600 to \$5,999 and with four or more members consumed the greatest amount of mellorine.

Table Spreads

During the week prior to the interview about 77 percent of table spreads used for all purposes was oleomargarine; the remainder was butter. Butter was used by 32 percent of all households but was used with oleomargarine in about 28 percent of the households (Table 6). Few families consumed butter exclusively.

For all households, the consumption of oleomargarine averaged 0.9 pound (3.6 quarter pounds) per week. Families with incomes below \$1,000 consumed about 2.0 quarter pounds per week. The greatest consumption was 4.7 quarter pounds per week for families with incomes \$6,000 and over (Table 7). Consumption also varied directly with family size. It was lowest (1.4 quarter pounds) for family size one and highest (6.2 quarter pounds) for family size 7 and over.

Households in the small city market used about one-third as much butter as oleomargarine. Butter consumption averaged 0.3 pound per week (Table 6). By income level, the heaviest use was in high income and low income families (Table 7). The distribution of butter as a commodity by governmental agencies was responsible for a part of the relatively high consumption by low income families. About two-thirds more butter was consumed per week by families with incomes \$4,800 and over than was consumed by families with incomes between \$2,400 and \$4,799.

Butter consumption also increased as families became larger. Consumption averaged 0.7 quarter pound per week for family size one and increased to 1.5 quarter pounds per week for family size 7 and over. There was a significant variation in butter consumption from one family size to the next and the increase was not as great as the increase in family size. Therefore, per capita consumption of butter declined with increasing family size.

Preference for Services

Place of Purchase

Fifty-five percent of the households said they preferred to purchase milk at the grocery store and about 28 percent preferred to have their

fresh fluid milk delivered to the home. Approximately 10 percent preferred to purchase milk from farmers and other sources while the remaining families did not express a preference.

Grocery Store. A greater preference for the grocery store as a place of purchase was expressed by families with incomes below \$3,600 than by families with incomes \$3,600 and over (Table 8). However, the relation of preference to income for the lowest income level was distorted by the families who did not buy fresh milk. With these families excluded, about 60 percent of the households in the lowest income group preferred the grocery store. This was about the same as in the next two income groups. In the higher income groups, from 45 to 55 percent of the households preferred the store.

As family size increased up to 4 members, there was a tendency for a decrease in the preference for store purchases of milk. For larger families, the preference for the store increased which reflected the effect of lower per capita incomes available for spending.

The most frequent reasons given for preferring the grocery store were convenience, quantity of milk used, and at the store anyway (Table 9). Low cost as such was given as a reason by about two percent of the families. Unsatisfactory delivery time was given by about six percent of the families as a reason for preferring the store.

Home Delivery. The preference for home delivery increased directly with family income. About 18 percent of the families in the lowest income level preferred home delivery as compared with 43 percent of the families in the highest income group expressing this preference (Table 8). There was very little relationship between family size and the preference for home delivery.

Convenience was the most frequent reason given for the preference for home delivery (Table 9). Convenience represented 76 percent of all reasons given for this preference. Taste, freshness, or quality and brand, container, or service were also important reasons.

Consumers on route delivery were asked to give the price reduction at the store which would cause them to change from the route to the store. About 44 percent of the families would not change for any price reduction. About 15 percent said they would change to the store for a further reduction of two cents per quart, 15 percent would change for three cents, 6 percent would change for four cents and 13 percent would

change for five cents per quart. On the basis of these figures, 30 percent of the route customers said they would change to the store for a price reduction of three cents per quart and 48 percent would change for a reduction of five cents per quart.

Frequency of Purchase

About 32 percent of the households preferred to get milk three times a week (Table 10). Approximately 23 percent preferred daily purchases and about 12 percent preferred every other day purchases. On the other hand, about 17 percent of the households preferred purchasing milk less frequently than three times each week.

Three Times a Week: Family income was directly related to the preference for this frequency of purchasing milk (Table 10). Only 16 percent of the lowest income families preferred to purchase milk three times a week. This compares with 54 percent of the families with incomes of \$4,800 to \$5,999 preferring this frequency. There was some tendency for preference for the three times a week purchase to increase with family size up to four member families. For larger families, a more frequent purchase pattern was preferred.

The principle reasons given for preferring the three times a week frequency were quantity used and convenience (Table 11). Taste, freshness or quality was an important reason for about 11 percent of the households. Storage facilities was an important reason for less than 10 percent of the respondents.

Daily. About half the households preferring daily purchases were in the \$2,400 to \$4,799 income brackets (Table 10). Generally, there was a greater preference for daily purchases of milk for families with incomes \$2,400 and over than for families with incomes below \$2,400. This reflected the greater use of milk by families with higher incomes.

The preference for daily purchase increased with family size. Only eight percent of one member families preferred daily purchase while 42 percent of the families with seven or more members preferred this frequency.

The most frequent reason given for preferring the daily purchase of milk was the general reason of taste, freshness, or quality (Table 11). The quantity of milk used was the next in importance. Convenience and storage facilities were important reasons given by 15 to 20 percent of the households for the daily purchase preference.

Every Other Day. Income was not related to the preference for purchasing milk every other day (Table 10). However, there was some tendency for family size to be related to this frequency of purchase. About nine percent of the families with one member as compared with 21 percent of the families with seven or more members preferred the every other day frequency of purchase. The most frequent reasons given for this preference were quantity used, convenience, and taste, freshness, or quality (Table 11).

Other Frequencies. When family consumption of milk is small, a frequency of once a week or twice a week may be sufficient. Generally the lower income and smaller size families used less milk and, therefore, preferred this less frequent purchase pattern. In the small city market, the respondents preferring once or twice a week purchase stated that the quantity of milk used was the principal reason for this preference (Table II). Convenience was also important to some families.

Type of Container

Paper containers were used by 91 percent of the consumers who were purchasing milk from the grocery store or other sources; the remainder used glass containers. About 96 percent of the households on delivery routes used glass containers.

Paper Containers. If milk were not delivered, 57 percent of all households in the small city market would prefer paper cartons (Table 12). Neither income nor family size was related to the preference for the paper container. No bottles to handle was the most frequent reason given for this preference (Table 13). A closely related reason, convenience, was given by about 20 percent of the respondents for the preference for paper milk containers. About seven percent thought that milk in paper containers was more sanitary.

If milk were delivered, about 39 percent of the households would prefer the paper container. Family size was not related to the preference for paper containers on delivery routes but household income was related to this preference (Appendix Table 2). As income increased, the preference for the paper container declined. No bottles to handle was the most important reason for this preference (Table 13). Convenience and the belief that milk in paper containers is more sanitary were important reasons given by some families.

Glass Containers. About 30 percent of the households would prefer glass containers at the grocery store. Income and family size were not

related to this preference (Appendix Table 2). Four reasons were important in the minds of these consumers. First, they thought that the milk "tasted" better or would "keep" better. Second, they thought that glass containers were more sanitary. Third, they thought that glass containers were more convenient. Fourth, they preferred the visual inspection made possible by glass containers.

If milk were delivered, about 47 percent of all households would prefer glass containers. This preference was not related to family size. As related to income, the preference for glass increased for the higher income families (Table 12). Taste or keeps better was given by 43 percent of the households as a reason for this preference (Table 13). More sanitary was a second important reason given for this preference. Additional reasons for this preference included convenience, visual inspection, habit, and others (including wax and leakage problems with paper).

Size of Container

The preference of the housewife for size of container was related to the amount of milk consumed, to convenience in storage or use of milk, and to any economy features that might be obtained with the larger size containers. Generally, the medium size container was more popular at the grocery store than on the delivery route. However, the preference for a particular container size as related to income level and family size was similar from the two sources.

Quart. About 44 percent of the households would prefer the quart size container if milk were not delivered (Table 14). About 47 percent would prefer the quart size if milk were delivered (Appendix Table 3). The quart container was most popular for the smaller size families. These families used less milk and the quart container was large enough to satisfy their needs. As the family size increased the preference for the quart container decreased. Only 11 percent of the families with seven or more members preferred the quart at the store as compared with 76 percent of the families with one member with this preference.

Income was also related to the preference for the quart container partially because of the amount of milk consumed. About 65 percent of the families with less than \$1,000 annual income preferred the quart container at the store. With increasing income this preference decreased. Only 26 percent of the families with incomes of \$4,800 to \$5,999 preferred the quart container at the store.

The amount of milk used was the reason given by 54 percent of the households for the quart container preference when purchasing milk at the store (Table 15). Convenience was a reason given by 26 percent of the households. About 10 percent of the households would prefer the quart size at the store because of storage facilities.

Half Gallon. If milk were not delivered, 46 percent of all households would prefer the half gallon container (Table 14). About 39 percent would prefer this size if milk were delivered (Appendix Table 3). The preference for the half gallon container increased with both family size and income level. This reflected the fact that these families used relatively more milk than other families. Half gallon containers were preferred at the store because of amount of milk used (43 percent of all reasons given for this preference), convenience (23 percent), and storage facilities (22 percent).

Gallon. Relatively few families preferred the gallon size containers. About five percent of the households would prefer the gallon size if milk were delivered but only two percent would prefer the gallon size if milk were not delivered (Table 14 and Appendix Table 3). The amount of milk used was the most important reason given for preferring the gallon size at the store (Table 15). Low cost and storage facilities were also reasons given for the gallon preference if milk were delivered.

Comparison of Small City with Large City Markets Consumption Estimates

Generally, the pattern of milk consumption in the small city market was similar to the large city market. Average household consumption of fresh fluid milk for the entire small city market was slightly less than in Oklahoma City but average incomes were also lower. For given income levels, the consumption of fresh fluid milk in small cities averaged about one-half quart per week higher than in Oklahoma City. For moderate to high income families, consumption averaged from 0.8 to 2.0 quarts more per week (Figure 2). Consumption in the small city market was about the same as the average for urban families in the United States.

Opinions concerning the richness of fresh fluid milk were about the same for consumers in small cities as for consumers in the large cities. If milk were made richer, a slightly larger percentage of the households in the small cities said they would use less milk.

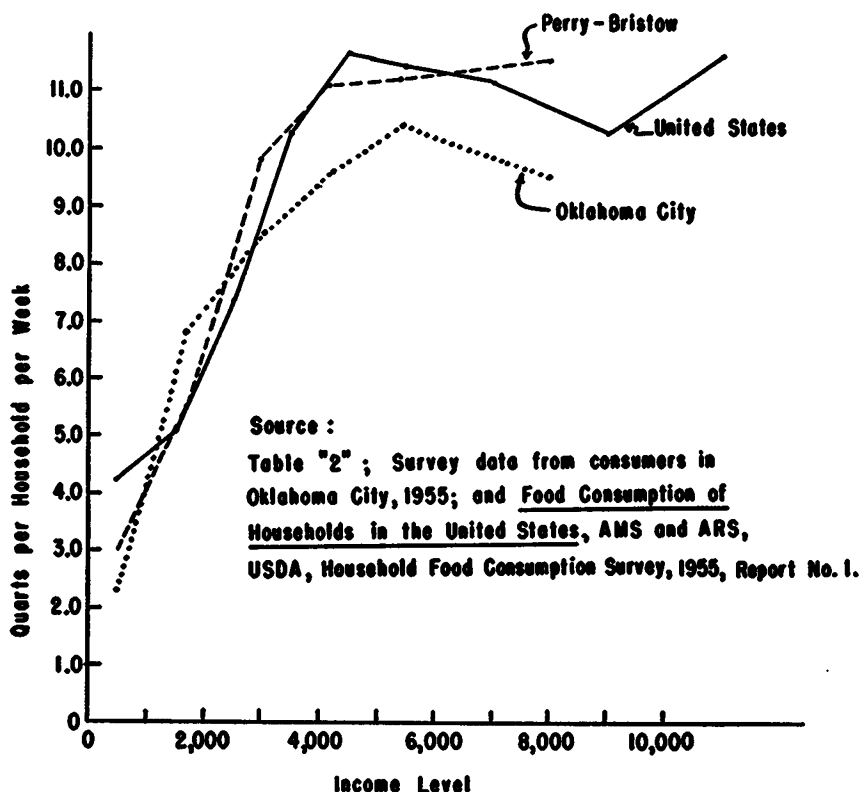


Fig. 2—Consumption of Fresh Fluid Whole Milk, Oklahoma Markets and United States, 1955.

The household purchases of fresh fluid cream, buttermilk, and chocolate milk were about the same in small and large cities. The average weekly quantity of canned milk consumed was about the same in both markets but there was less difference in the consumption of canned milk as related to income level in the small city market. In other words, family income was not as important in determining canned milk consumption in the small cities as in the large city.

Powdered milk consumption was about the same in both markets. However, the rate of use by families using powdered milk was only about two-thirds as great in small cities as in Oklahoma City.

Age and sex were related to the quantities of milk of all kinds drunk by individual household members in both markets. There was no sta-

tistically significant trend in consumption by age in either market for males and a downward trend was evident in each market for females. However, the decline in milk drinking by females as age increased was slightly larger in the small city market than in the Oklahoma City market.

The weekly consumption of the various frozen desserts was about 70 percent greater in the small city market than in the large city market. This rate was expected to be higher since the Perry survey was conducted during September, a relatively warm season of the year. Consumption in Perry averaged twice as great as in Oklahoma City. In Bristow, consumption averaged about 10 percent above the Oklahoma City rate and both surveys were conducted under similar seasonal weather conditions.

By type of frozen dessert, the greatest difference in the two markets was in the consumption of ice milk. About seven times as many families in the small cities used ice milk as compared with Oklahoma City. A part of the difference was caused by wider availability of ice milk in these markets.

The relationships for table spreads (butter and oleomargarine) were about the same in both markets. The principal exception was the relatively high butter consumption by low income consumers in the small city market. This was attributed, in part, to the various food distribution programs.

Preference for Services

A greater number of consumers in the small city market than in the large city market preferred to get milk at the grocery store or direct from farmers. This was expected since distance was less important in the smaller cities. However, the influence of family size or income level on the preference for services was similar in the two markets.

There was less preference for the three times a week frequency of purchase of milk in the small city market than in Oklahoma City. A larger number of households preferred more frequent purchases. Also there was a slightly larger number of households preferring a frequency less often than three times a week.

Preferences for container type and container size by households in small cities were quite similar to the preferences found in Oklahoma City. The reasons for these preferences were also about the same. Generally, consumers preferred paper containers at the store and glass containers if milk were delivered. However, a substantial minority of the

consumers preferred the glass containers regardless of place of purchase. The preference for size of container in each market depended directly on the quantity of milk used by the individual households. Generally, the quart container was preferred by lower income and smaller size families. The half gallon container was preferred by middle income and medium to large size families.

Table 1.—Weekly Consumption of Milk, Cream and Filled Milk Products by Sample Households, Perry and Bristow.

Product	Users		Average Consumption	
	Number	Percentage*	by users	by all households
Fresh fluid milk	496	93.1	8.77 qts.	8.16 qts.
Fresh fluid cream	77	14.4	2.17 ½ pts.	0.31 ½ pts.
Buttermilk	193	36.2	1.71 qts.	0.62 qts.
Chocolate milk	32	6.0	1.34 qts.	0.08 qts.
All canned milk	306	57.4	2.97 cans**	1.70 cans**
Filled milk†	196	36.8	2.30 cans**	0.85 cans**
Powdered milk	134	25.1	2.77 qts.††	0.70 qts.††

* Percentage of total number of households in the study.

** Cans of 15 fluid ounces or 14 1/2 ounces net weight.

† Filled milk is made from a skim milk base with vegetable fat or animal fat substituted for butterfat.

†† Quarts equivalent when powdered milk is mixed for use.

Source: Survey data from consumers in Perry and Bristow (September, 1955 and April, 1956 respectively).

Table 2.—Weekly Average Quantity of Milk and Cream Consumed by Sample Households, Perry and Bristow.

Family Size	Income Groups						Average*
	Under \$1,000	\$1,000-2,399	\$2,400-3,599	\$3,600-4,799	\$4,800-5,999	\$6,000 and over	
Fresh Fluid Milk (Quarts)							
1	1.6	3.1	3.6	3.0	3.3	---	2.8
2	3.0	4.8	8.1	4.7	6.6	6.1	5.2
3	3.3	6.5	8.3	9.1	10.1	8.8	8.2
4	7.7	12.0	10.2	12.7	10.9	15.1	12.1
5 and 6	4.0	10.0	17.4	15.6	19.9	19.7	16.4
7 & over	9.0	4.0	8.8	22.0	26.2	17.0	16.3
Average*	3.0	5.5	9.8	11.1	11.2	11.5	8.2
Fresh Fluid Cream (One-half Pints)†							
1	0.2	0.3	0.3	0.0	1.0	---	0.3
2	0.3	0.3	0.0	0.3	0.8	0.3	0.3
3	0.4	0.3	0.4	0.5	0.1	0.3	0.3
4	0.0	3.0	0.1	0.1	0.2	0.9	0.4
5 and 6	0.0	0.0	0.1	0.2	0.4	0.9	0.3
7 & over	0.0	0.0	0.0	0.4	1.0	2.0	0.5
Average*	0.3	0.3	0.2	0.3	0.4	0.6	0.3

Table 2.—Weekly Average Quantity of Milk and Cream Consumed by Sample Households, Perry and Bristow.

Family Size	Income Groups						Average*
	Under \$1,000	\$1,000-2,999	\$2,400-3,599	\$36,00-4,799	\$4,800-5,999	\$6,000 and over	
Buttermilk (Quarts)							
1	0.3	0.9	0.7	5.0	0.3	---	0.6
2	0.7	0.3	0.8	0.4	1.0	1.1	0.6
3	0.6	0.8	0.2	0.6	0.8	0.7	0.6
4	0.0	0.3	1.5	0.5	0.7	0.9	0.8
5 and 6	2.0	0.3	0.6	0.4	0.3	0.3	0.4
7 & over	5.0	0.0	0.5	1.0	0.5	0.0	1.0
Average*	0.6	0.5	0.7	0.6	0.7	0.8	0.6
Canned Milk (14 1/2 Ounce Cans)							
1	0.8	0.4	0.3	0.0	0.0	---	0.6
2	1.5	1.3	0.6	0.9	0.9	0.3	1.1
3	2.9	2.2	2.3	1.4	0.9	3.8	2.1
4	24.0	1.0	0.8	1.6	1.3	1.4	2.2
5 and 6	3.0	4.6	3.0	3.4	2.5	0.6	3.0
7 & over	3.0	8.5	4.0	3.8	5.0	0.0	4.1
Average*	1.9	1.7	1.7	1.9	1.4	1.6	1.7
Powdered Milk (Quarts Equivalent)							
1	0.5	0.0	0.0	0.0	0.7	---	0.4
2	1.1	0.8	0.7	0.1	0.7	0.3	0.7
3	3.1	1.3	0.1	0.3	0.4	0.1	0.7
4	0.0	1.0	0.1	0.5	0.7	0.5	0.5
5 and 6	3.0	2.0	0.2	1.1	0.3	0.4	0.8
7 & over	5.5	3.5	5.0	0.8	1.5	2.0	2.7
Average*	1.0	0.9	0.5	0.5	0.6	0.4	0.7
All Milk (Quarts Equivalent)							
1	3.4	4.7	4.9	8.0	5.3	---	4.7
2	6.6	7.5	10.2	6.4	10.0	8.1	7.9
3	10.3	11.1	11.3	11.9	12.3	13.7	11.9
4	31.7	17.3	12.7	15.4	13.1	18.8	16.0
5 and 6	12.0	16.9	21.3	20.7	23.4	21.9	20.9
7 & over	22.5	16.0	18.3	28.0	34.2	19.0	24.6
Average*	6.8	8.9	12.9	14.4	14.3	14.9	11.5

* Average quantity consumed per household for all households in that group.

† Coffee cream, whipping cream and half and half.

Source: Survey data from consumers in Perry and Bristow (September, 1955 and April, 1956 respectively).

Table 3.—Consumers Who Would Use More, About the Same, or Less Milk If Butterfat Content Were Increased, Perry and Bristow.*

Income Group	More		About Same		Less		Others*	
	No.	Pct.†	No.	Pct.†	No.	Pct.†	No.	Pct.†
Under \$1,000	4	3.9	59	57.3	8	7.8	32	31.0
\$1,000-2,399	6	5.3	79	69.9	7	6.2	21	18.6
\$2,400-3,599	4	4.6	61	70.1	8	9.2	14	16.0
\$3,600-4,799	5	5.1	81	82.7	6	6.1	6	6.1
\$4,800-5,999	1	1.3	64	82.1	5	6.4	8	10.3
\$6,000 and over	2	3.7	44	81.5	5	9.3	3	5.6
Total Number	22		388		39		83	
Percentage†		4.1		72.7		7.3		15.7

* Includes "don't know" and no response answers.

† Percentage of total number of households in each response group.

Source: Survey data from consumers in Perry and Bristow (September, 1955 and April, 1956 respectively).

Table 4.—Reasons Given By Households for Preferring Canned Milk for Drinking and Other Uses, Perry and Bristow.

Reasons	Preference of Canned Milk for:	
	Drinking	Other Uses
Low cost	8	114
Substitute for cream	0	122
Taste	2	13
Convenience	1	26
Storage and reserve	3	48
Easy to use	0	11
Recipes call for it	0	53
Other	7	25
Number of households preferring	28	306

Source: Survey data from consumers in Perry and Bristow (September, 1955 and April, 1956 respectively).

Table 5.—Reasons Given by Households for Preferring Powdered Milk Over Fresh Fluid Whole and Skim Milk for Drinking, Perry and Bristow.

Reasons	Preference of Powdered Milk Over	
	Whole Milk	Skim Milk
	Number	Number
Low cost	26	18
Fewer calories	20	9
Storage and reserve	8	5
Taste	3	6
Convenience	1	9
Never use skim	0	18
Other	14	9
Number of households preferring	54	54

Source: Survey data from consumers in Perry and Bristow (September, 1955 and April, 1956 respectively).

Table 6.—Weekly Consumption of Selected Milk Products and Substitutes By Sample Households, Perry and Bristow.

Product	Users		Average Consumption by Users	Average Consumption by all Households
	No.	Pct.*		
Cottage Cheese	329	61.7	1.7†	1.0†
Ice Cream	198	37.1	3.1 pts.	1.2 pts.
Ice Milk	121	22.7	3.0 qts.	0.7 qt.
Mellorine	87	16.3	2.4 qts.	0.4 qt.
Butter	172	32.3	0.8 lbs.	0.3 lbs.
Oleomargarine	401	75.2	1.2 lbs.	0.9 lbs.

* Percentage of all households in the survey.

† 12 ounce cartons.

Source: Survey data from consumers in Perry and Bristow (September, 1955 and April, 1956 respectively).

Table 7.—Weekly Average Quantity of Selected Milk Products and Substitutes Consumed by Sample Households; Perry and Bristow.

Family Size	Income Groups						Average*
	Under \$1,000	\$1,000-2,399	\$2,400-3,599	\$3,600-4,799	\$4,800-5,999	\$6,000 and over	
Cottage Cheese (12 Ounce Carton)							
1	0.3	0.9	0.4	0.5	0.7	**	0.4
2	0.5	0.8	1.5	1.3	1.1	1.3	1.0
3	0.3	0.9	1.7	1.4	1.0	1.4	1.2
4	0.3	0.3	1.1	1.2	1.5	1.3	1.2
5 and 6	0.0	0.4	1.6	1.0	1.8	1.6	1.3
7 & over	1.0	0.5	1.0	0.4	2.8	4.0	1.5
Average*	0.4	0.8	1.4	1.2	1.4	1.4	1.0

Table 7.—Continued.

Family Size	Income Groups						Average*
	Under \$-,000	\$1,000-2,399	\$2,400-3,599	\$3,600-4,799	\$4,800-5,999	\$6,000 and over	
Ice Cream (Pints)							
1	0.4	0.5	0.6	0.0	0.3	**	0.4
2	0.8	0.8	1.6	0.7	1.5	1.0	1.0
3	2.9	1.2	0.6	2.0	1.7	3.1	1.7
4	1.0	0.3	1.4	0.8	2.1	1.6	1.4
5 and 6	4.0	0.4	2.1	0.6	2.0	1.9	1.4
7 & over	4.0	0.0	1.5	0.0	4.8	0.0	1.7
Average*	0.8	0.8	1.3	0.9	1.9	1.8	1.2
Ice Milk (Quarts)							
1	0.2	0.5	0.2	0.0	0.7	**	0.3
2	0.5	0.5	0.8	1.0	0.8	0.8	0.7
3	0.0	0.7	0.8	0.5	0.9	0.1	0.6
4	0.0	1.3	1.0	0.5	0.6	0.4	0.6
5 and 6	0.0	1.3	1.6	1.4	0.6	1.7	1.3
7 & over	0.0	6.5	0.0	1.6	0.0	0.0	1.1
Average*	0.3	0.7	0.9	0.9	0.7	0.6	0.7
Mellorine (Quarts)							
1	0.03	0.0	0.0	0.0	0.0	**	0.02
2	0.3	0.2	0.3	0.3	0.1	0.1	0.2
3	0.0	0.2	1.0	0.2	0.4	0.0	0.4
4	0.0	0.0	0.3	1.0	0.7	0.7	0.7
5 and 6	0.0	1.1	0.2	1.0	1.2	0.6	0.8
7 & over	2.5	0.0	0.5	0.8	1.0	0.0	0.8
Average*	0.2	0.2	0.5	0.7	0.5	0.3	0.4
Butter (1/4 lb.)							
1	0.6	0.9	0.6	0.0	1.3	**	0.7
2	1.0	1.2	0.5	1.0	0.6	1.0	0.9
3	3.1	1.8	0.9	0.6	1.3	2.0	1.4
4	1.3	2.3	0.3	0.4	1.8	1.5	1.1
5 and 6	6.0	2.6	1.6	1.0	0.3	0.6	1.2
7 & over	2.0	3.0	1.0	0.4	2.0	2.0	1.5
Average*	1.0	1.4	0.8	0.7	1.1	1.4	1.1
Oleomargarine (1/4 lb.)							
1	1.4	1.8	1.2	0.5	1.3	**	1.4
2	3.4	2.7	3.6	2.3	3.5	2.1	2.9
3	1.4	2.0	3.8	3.0	4.6	5.1	3.4
4	1.7	2.0	6.8	5.7	5.0	4.5	5.1
5 and 6	0.0	5.7	5.0	6.5	6.2	8.6	6.1
7 & over	2.0	4.5	3.5	8.0	7.5	10.0	6.2
Average*	2.0	2.6	4.1	4.5	4.6	4.7	3.6

* Average quantity consumed by each family in this income group or family size.

** No users in this class.

Source: Survey data from consumers in Perry and Bristow (September, 1955 and April, 1956 respectively).

Table 8.—Preference as to Place of Purchase of Fresh Fluid Milk, Perry and Bristow.

Family size	Income Group						Total Number	Percentage of:	
	Under \$1,000	\$1,000 2,399	\$2,400 3,599	\$3,600 4,799	\$4,800 5,999	\$6,000 and over		Preferers*	Group†
Prefer Store Purchase									
1	29	10	4	0	2	**	45	15.3	52.3
2	15	38	18	18	13	9	111	37.6	62.4
3	3	12	15	10	9	11	60	20.3	54.5
4	2	3	6	10	4	5	30	10.2	40.0
5 & 6	0	6	8	11	7	4	36	12.2	55.4
7 & over	2	2	3	5	1	0	13	4.4	68.4
Total									
No.	51	71	54	54	36	29	295		
Percent- age of:									
Prefer- ers	12.6	15.2	12.6	21.2	23.2	15.2		100	
Group†	49.5	62.8	62.1	55.1	46.2	53.7			55.3
Prefer Home Delivery									
1	14	3	4	1	0	**	22	13.9	24.4
2	2	13	6	3	6	6	36	23.8	20.2
3	2	7	4	8	9	2	32	21.2	29.1
4	1	0	0	11	14	10	36	23.8	48.0
5 & 6	0	0	4	9	3	3	19	12.6	29.2
7 & over	0	0	1	0	3	2	6	4.0	31.6
Total									
No.	19	23	19	32	35	23	151		
Percent- age of:									
Prefer- ers*	12.6	15.2	12.6	21.2	23.2	15.2		100	
Group†	18.4	20.4	21.8	32.7	44.9	42.6			28.2

* Percentage of the total number of households preferring to purchase milk at that place of purchase.

** No users in this class.

† Percentage of the total number of households in this income group or family size.

Source: Survey data from consumers in Perry and Bristow (September, 1955 and April, 1956 respectively).

Table 9.—Reasons Given by Households for Preference of Place of Purchase of Fresh Fluid Milk, Perry and Bristow.

Reasons	Delivery (Number)	Store (Number)
Low cost	1	6
Convenience	126	124
Taste, freshness or quality	22	5
Storage facility	1	0
Quantity used	7	102
Brand, container or service	21	4
Unsatisfactory delivery time	—	18
At store anyway	—	69
Habit	4	9
Other	12	47
Number of households preferring	151	295

Source: Survey data from consumers in Perry and Bristow (September, 1955 and April, 1956 respectively).

Table 10.—Preference for Frequency of Purchasing Fresh Fluid Milk; Perry and Bristow.

Family size	Income Group						Total Number	Percentage of:	
	Under \$1,000	\$1,000 2,399	\$2,400 3,599	\$3,600 4,799	4,800 5,999	\$6,000 and over		Prefer- rers*	Total in group**
Daily									
1	4	2	1	0	0	***	7	5.7	8.1
2	4	9	6	1	2	2	24	19.7	13.5
3	1	6	11	7	1	6	32	26.2	29.1
4	0	1	2	7	7	7	24	19.7	32.0
5 & 6	1	0	7	12	5	2	27	22.1	41.5
7 & over	0	0	0	4	3	1	8	6.6	42.1
Total									
No.	10	18	27	31	18	18	122		
Percent- age of:									
Prefer- rers*		8.2	14.8	22.1	25.4	14.8	14.8	100.0	
Group**	9.7	15.9	31.0	31.6	23.1	33.3			22.9
Every Other Day									
1	6	2	0	0	0	***	8	12.3	9.3
2	1	9	3	1	4	2	20	30.8	11.2
3	0	2	3	2	2	2	11	16.9	10.0
4	2	0	2	4	1	0	9	13.8	12.0
5 & 6	0	1	4	4	1	3	13	20.0	20.0
7 & over	2	0	1	1	0	0	4	6.2	21.1
Total									
No.	11	14	13	12	8	7	65		
Percent- age of:									
Prefer- rers*	16.9	21.5	20.0	18.5	12.3	10.8	100.0		
Group**	10.7	12.4	14.9	12.2	10.3	13.0			12.2

Table 10.—Continued.

Family Size	Income Groups						Total Number	Prefer- ers*	Total in Group **
	Under \$1,000	\$1,000 2,399	\$2,400 3,599	\$3,600 4,799	\$4,800 5,999	\$6,000 and over			
Three Times a Week									
1	9	2	3	1	1	***	16	9.3	18.6
2	4	17	6	12	11	5	55	32.0	30.9
3	2	6	7	8	15	4	42	24.4	38.2
4	1	2	8	9	11	6	37	21.5	49.3
5 & 6	0	3	2	8	3	2	18	10.5	27.7
7 & over	0	0	2	0	1	1	4	2.3	21.1
Total									
No.	16	30	28	38	42	18	172		
Percent- age of:									
Prefer- ers*	9.3	17.4	16.3	22.1	24.4	10.5		100.0	
Group**	15.5	26.5	32.2	38.8	53.8	33.3			32.3

* Percentage of the total number of households preferring to purchase their milk at interval indicated.

** Percentage of the total number of households in this income group or family size.

*** No users in this class.

Source: Survey data from consumers in Perry and Bristow (September, 1955 and April, 1956 respectively).

Table 11.—Reasons Given by Households for Preference of Frequency of Purchase of Fresh Fluid Milk, Perry and Bristow.

Reasons	Daily	Every Other Day	Three Times a Week	Twice a Week	Once a Week
	(Number)	(Number)	(Number)	(Number)	(Number)
Low cost	0	0	1	0	0
Convenience	25	23	72	15	8
Taste, freshness or quality	64	11	19	1	0
Storage facilities	19	3	12	4	0
Quantity used	38	29	77	40	32
Brand, container or service	0	0	6	0	0
At store anyway	9	2	4	6	0
Habit	7	1	12	0	1
Other	4	3	0	2	1
Number of households preferring	122	65	172	58	39

Source: Survey data from consumers in Perry and Bristow (September, 1955 and April, 1956 respectively).

Table 12.—Preference for Milk Containers for Home Delivery and for Purchase at Store; Perry and Bristow.

Family Size	Income Group						Total Number	Percentage of:	
	Under \$1,000	\$1,000 2,399	\$2,400 3,599	\$3,600 4,799	\$4,800 5,999	\$6,000 and over		Prefer-ers*	Total in Group**
Glass Container Delivered at Home									
1	27	4	6	1	3	***	41	16.3	47.7
2	12	26	5	10	9	7	69	27.4	38.8
3	4	12	13	9	15	9	62	24.6	56.4
4	0	0	9	13	12	10	44	17.5	58.7
5 & 6	1	1	7	13	5	2	29	11.5	44.6
7 & over	0	0	3	1	1	2	7	2.8	36.8
Total									
No.	44	43	43	47	45	30	252		
Percent- age of:									
Prefer- ers*	17.5	17.1	17.1	18.7	17.9	11.9		100.0	
Group**	42.7	38.1	49.4	48.0	57.7	55.6			47.3
Paper Container at Store									
1	26	9	3	1	0	***	39	12.8	45.3
2	11	40	17	15	15	10	108	35.4	60.7
3	1	13	16	13	11	7	61	20.0	55.5
4	2	3	5	11	13	9	43	14.1	57.3
5 & 6	0	6	10	12	6	6	40	13.1	61.5
7 & over	2	2	2	5	2	1	14	4.6	73.7
Total									
No.	42	73	53	57	47	33	305		
Percent- age of:									
Prefer- ers*	13.8	23.9	17.4	18.7	15.4	10.8		100.0	
Group**	40.8	64.6	60.9	58.2	60.3	61.1			57.2

* Percentage of the total number of households preferring to purchase their milk in indicated container for indicated method of purchase.

** Percentage of the total number of households in this income group or family size.

*** No users in this class.

Source: Survey data from consumers in Perry and Bristow (September, 1955 and April, 1956 respectively).

Table 13.—Reasons Given by Households for Preference of Container Type, Perry and Bristow.

Reasons	When Milk is Not Delivered		When Milk is Delivered	
	Paper Carton (Number)	Glass Bottle (Number)	Paper Carton (Number)	Glass Bottle (Number)
Low cost	0	0	0	2
Convenience	59	23	35	30
Taste, keeps better	6	61	5	109
Storage facilities	7	4	8	2
Amount used	0	1	3	2
More sanitary	20	43	22	59
No bottles to handle	263	0	172	0
Visual inspection	0	21	0	26
Habit	4	10	3	20
Other	10	8	3	21
Number of households preferring	305	162	207	252

Source: Survey data from consumers in Perry and Bristow (September, 1955 and April, 1956 respectively).

Table 14.—Preference for Container Size When Milk is not Delivered; Perry and Bristow.

Family Size	Income Group						Total Number	Percentage of:		
	Under \$1,000	\$1,000 2,399	\$2,400 3,599	\$3,600 4,799	\$4,800 5,999	\$6,000 and over		Prefer-ers*	Total in Group**	
	Quart Container									
1	46	11	6	1	1	***	65	27.9	75.6	
2	14	41	7	13	7	8	90	38.6	50.6	
3	5	12	8	8	6	10	49	21.0	44.5	
4	1	1	4	3	4	2	15	6.4	20.0	
5 & 6	1	1	2	5	2	1	12	5.2	18.5	
7 & over	0	0	1	1	0	0	2	0.9	10.5	
Total										
No.	67	66	28	31	20	21	233			
Percent- age of:										
Prefer- ers*	28.8	28.3	12.0	13.3	8.6	9.0		100.0		
Group**	65.0	58.4	32.2	31.6	25.6	38.9			43.7	

Table 14.—Continued.

Family Size	Income Group						Total Number	Percentage of:	
	Under \$1,000	\$1,000 2,399	\$2,400 3,599	\$3,600 4,799	\$4,800 5,999	\$6,000 and over		Prefer-rers*	Total in Group**
Half Gallon Container									
1	2	2	2	0	0	***	6	2.4	7.0
2	6	18	14	8	12	8	66	26.8	37.1
3	2	9	14	13	15	4	57	23.2	51.8
4	1	2	7	17	15	13	55	22.4	73.3
5 & 6	0	5	10	18	8	6	47	19.1	72.3
7 & over	2	2	3	4	3	1	15	6.1	78.9
Total									
No.	13	38	50	60	53	32	246		
Percent- age of:									
Prefer- rers*	5.3	15.4	20.3	24.4	21.5	13.0		100.0	
Group**	12.6	33.6	57.5	61.2	67.9	59.3			46.2
Gallon Container									
1	0	0	0	0	0	***	0		
2	3	0	0	0	0	0	3	30.0	1.7
3	1	0	0	0	0	0	1	10.0	0.9
4	1	0	1	0	0	0	2	20.0	2.7
5 & 6	0	0	1	1	0	0	2	20.0	3.1
7 & over	0	0	0	0	1	1	2	20.0	10.5
Total									
No.	5	0	2	1	1	1	10		
Percent- age of:									
Prefer- rers*	50.0		20.0	10.0	10.0	10.0		100.0	
Group**	4.9		2.3	1.0	1.3	1.9			1.9

* Percentage of total number of households preferring indicated size for indicated method of purchase.

** Percentage of total number of households in this income group or family size.

*** No users in this class.

Source: Survey data from consumers in Perry and Bristow (September, 1955 and April, 1956 respectively).

Table 15.—Reasons Given by Households for Preference of Container Size When Milk is not Delivered, Perry and Bristow.

Reasons	Quart (Number)	Half Gallon (Number)	Gallon (Number)
Low cost	0	19	1
Convenience	69	75	1
Taste, keep better	15	4	0
Storage facilities	26	70	2
Amount used	141	138	7
Other	3	8	1
Habit	8	6	0
Number of households preferring	233	246	10

Source: Survey data from consumers in Perry and Bristow (September, 1955 and April, 1956 respectively).

Appendix Table 1.—Average Number of Standard Glasses of Milk Drunk Daily by Individuals in Sample Households by Age and Sex; Perry and Bristow.

For Ages 1 through 20 years		
	Female	Male
	$Y = 3.3633 - .1060 x$	$Y = 2.6561 + .0416 x$
	$S = 1.6042$	$S = 2.0948$
	$y.x$	$y.x$
	$t = 5.7908^*$ with $n = 251$	$t = 1.7028$ with $n = 284$
For Ages 21 through 70 years and over		
Age	Female No. of Glasses	Male No. of Glasses
21-29	1.4	1.9
30-39	1.1	2.4
40-49	1.3	1.6
50-59	1.3	1.9
60-69	1.0	1.7
70-over	1.7	1.7

* Significant at the 99 percent probability level.

Source: Survey data from consumers in Perry and Bristow (September, 1955 and April, 1956 respectively).

Appendix Table 2.—Preference for Milk Containers for Home Delivery and for Purchase at Store; Perry and Bristow.

Family Size	Income Group						Total Number	Percentage of:	
	Under \$1,000	\$1,000 2,399	\$2,400 3,599	\$3,600 4,799	\$4,800 5,999	\$6,000 and over		Prefer-rers*	Total in Group**
Paper Container Delivered at Home									
1	19	7	2	0	0	***	28	13.5	32.6
2	8	31	15	11	10	5	80	38.6	44.9
3	1	8	8	9	6	4	36	17.4	32.7
4	2	3	3	5	5	5	23	11.1	30.7
5 & 6	0	5	6	10	5	3	29	14.0	44.6
7 & over	2	1	1	4	3	0	11	5.3	57.9
Total									
No.	32	55	35	39	29	17	207		
Percent- age of:									
Prefer- rers*	15.5	26.6	16.9	18.8	14.0	8.2		100.0	
Group**	31.1	48.7	40.2	38.8	37.2	31.5			38.8
Glass Container at Store									
1	21	3	4	0	0	***	28	17.3	32.6
2	12	11	2	4	5	5	39	24.1	21.9
3	3	12	5	8	9	6	43	26.5	39.1
4	0	0	7	10	6	6	29	17.9	38.7
5 & 6	1	0	2	10	4	1	18	11.1	27.7
7 & over	0	0	2	0	2	1	5	3.1	26.3
Total									
No.	37	26	22	32	26	19	162		
Percent- age of:									
Prefer- rers*	22.8	16.0	13.6	19.8	16.0	11.7		100.0	
Group**	35.9	23.0	25.3	32.7	33.3	35.2			30.4

* Percentage of the total number of households preferring to purchase their milk in indicated container for indicated method of purchase.

** Percentage of the total number of households in this income group or family size.

*** No users in this class.

Source: Survey data from consumers in Perry and Bristow (September, 1955 and April, 1956 respectively).

Appendix Table 3.—Preference for Container Size When Milk is Delivered; Perry and Bristow.

Family Size	Income Group						Total Number	Percentage of	
	Under \$1,000	\$1,000 2,399	\$2,400 3,599	\$3,600 4,799	\$4,800 5,999	\$6,000 and over		Prefer- ers*	Total in Group**
Quart Container									
1	45	12	6	1	2	***	66	26.1	76.7
2	16	39	12	14	11	11	103	40.7	57.9
3	2	16	10	8	7	12	55	21.7	50.0
4	1	1	3	2	6	2	15	5.9	20.0
5 & 6	1	1	3	5	1	0	11	4.3	16.9
7 & over	0	1	1	1	0	0	3	1.2	15.8
Total									
No.	65	70	35	31	27	25	253		
Percent- age of:									
Prefer- ers*	25.7	27.7	13.8	12.3	10.7	9.9		100.0	
Group**	63.1	61.9	40.2	31.6	34.6	46.3			47.5
Half-Gallon Container									
1	2	2	2	0	1	***	7	3.3	8.1
2	5	17	9	8	9	3	51	24.3	28.7
3	2	6	11	11	13	2	45	21.4	40.9
4	1	2	8	16	12	10	49	23.3	65.3
5 & 6	0	5	9	18	9	5	46	21.9	70.8
7 & over	2	1	3	3	2	1	12	5.7	63.2
Total									
No.	12	33	42	56	46	21	210		
Percent- age of:									
Prefer- ers*	5.7	15.7	20.0	26.7	21.9	10.0		100.0	
Group**	11.7	29.2	48.3	57.1	59.0	38.9			39.4

Appendix Table 3 (Continued)

Family Size	Income Group						Total Number	Percentage of	
	Under \$1,000	\$2,400 3,599	\$1,000 2,399	\$3,600 4,799	\$4,800 5,999	\$6,000 and over		Prefer- ers*	Total in Group**
Gallon Container									
1	0	0	0	0	0	***	0		
2	2	3	0	0	0	0	5	19.2	2.8
3	1	0	2	1	1	0	5	19.2	4.5
4	1	0	1	3	1	3	9	34.6	12.0
5 & 6	0	0	1	1	0	1	3	11.5	4.6
7 & over	0	0	0	1	2	1	4	15.4	21.1
Total									
No.	4	3	4	6	4	5	26		
Percent- ages of:									
Prefer- ers*	15.4	11.5	15.4	23.0	15.4	19.2		100.0	
Group**	3.9	2.7	4.6	6.1	5.1	9.3			4.9

* Percentage of total number of households preferring indicated size for indicated method of purchase.

** Percentage of total number of households in this income group or family size.

*** No users in this class.

Source: Survey data from consumers in Perry and Bristow (September, 1955 and April, 1956 respectively).

Appendix Table 4.—Number of Households in the Perry and Bristow Combined Market by Family Size and Income Group.

Family Size	Income Group						Total
	Under \$1,000	\$1,000 2,399	\$2,400 3,599	\$3,600 4,799	\$4,800 5,999	\$6,000 and over	
1	59	14	8	2	3	0	86
2	31	64	23	23	21	16	178
3	7	23	24	21	21	14	110
4	3	3	12	23	19	15	75
5 and 6	1	7	16	24	10	7	65
7 and over	2	2	4	5	4	2	19
Total	103	113	87	98	78	54	533

Source: Survey data from consumers in Perry and Bristow (September, 1955 and April, 1956 respectively).