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An Economic Analysis of Merchandising Fluid Milk in Utah

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AN ECONOMIC ANALYSIS OF MERCHANDISING FLUID MILK IN UTAH

by

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INTRODUCTION

Importance of the problem

The basic problem confronting the dairy industry today is one of utilizing its total fluid milk production. During recent years the industry has witnessed a general decrease in per capita consumption of dairy products while per capita production has remained fairly constant and in amounts approximating the average for the past 16 years (Table 2). As a result the dairy industry has produced a surplus of fluid milk and manufactured dairy products. The Federal Government, under its price support program, has been the ultimate recipient of these surpluses and now possesses huge warehouse stocks. The cost to the Federal Government and to the taxpayer has been great, resulting in an intense desire by both the Federal Government and the dairy industry to take steps to alleviate this condition. The following study is undertaken with the hope that the findings from it may provide the dairy industry with information which, in some small way, may contribute a partial solution to this problem.

Objectives of this study

The objectives of this analysis are:

(1) To analyze attitudes of consumers toward the effectiveness of various media used to advertise fluid milk.

(2) To analyze consumer attitudes, preferences and consumption of fluid milk.

The areas covered by this study are somewhat general and diversified. The areas studied and the questions asked resulted from personal interviews

with several prominent dairy industry leaders. Through these interviews the advertising and merchandising problems most paramount in the minds of these men were resolved. The questions asked were then devised to obtain information relative to these problems. The result was an analysis which may be somewhat broader in scope than possibly would have been made had these industry leaders not been consulted.

Trends in the dairy industry

Milk production in the United States has been undergoing a rapid change. Research, education and the widespread adoption of vastly improved production methods have increased the flow of fluid milk. During the same period the per capita consumption of milk and some milk products in the United States has declined, causing a widening gap between production and consumption and resulting in huge warehouse stockpiles of dairy products.

Milk production on farms in the United States reached an all-time high during 1954, totalling an estimated 125 billion pounds. It also topped the average production for the period of 1938-54 by nine billion pounds or eight per cent. Milk cows totalled 22.5 million head during 1954, the highest in five years, but were 12 per cent below the all-time peak of 1944. This number totalled only four per cent above the 1938-54 period low of 21.6 million in 1951. Milk production per cow, however, reached an all-time high of 5,500 pounds per cow in 1954, culminating 11 years of continuous increase in per cow production. This was 545 pounds or 11 per cent above the average for the 1938-54 period (Table 1). Per capita production increased one pound over the 1953 figure of 759 pounds. This was well below the record year of 1942 when per capita production totalled 879 pounds, and was six per cent below the 806 pound average for the 1938-54 period (Table 2).

Per capita consumption during 1954 totalled 700 pounds in total milk equivalents. This was an increase of 12 pounds over the 1953 record low of 688 pounds. This total was well below the 1938-54 period high of 821 pounds established in 1942 and seven per cent below the 752 pound average for the period. Per capita consumption of individual dairy products also showed a change. For fluid milk and cream per capita consumption of 352 pounds in 1954 was two pounds above the 1953 level and about the same as the previous six years. It was 13 per cent below the 1945 record high level of 399 pounds and two pounds below the 1938-54 period average of 354 pounds. Per capita consumption of cheese, averaging 7.7 pounds in 1954, was the highest on record and four per cent above the 1953 level. Evaporated milk per capita consumption at 14.6 pounds was down from the 1953 total of 15.2 pounds and 24 per cent below the record high of 18.1 pounds set in 1948.

Ice cream per capita consumption totalled 3.5 gallons, which was slightly below the levels for the previous five years, considerably lower than the record of 5.0 gallons in 1946, but three per cent above the 1938-54 average of 3.4 gallons. The per capita consumption of nonfat dry milk solids of 4.6 pounds equalled the all-time high accomplished in 1952 and was 53 per cent above the average of 3.0 pounds for the 1938-54 period. Butter was consumed at a per capita amount of 9.0 pounds in 1954. This was up slightly from the record lows of the previous two years, but was only one-half of the record high of 18.3 pounds set in 1934 and only 75 per cent of the 12.0 pound average for the 1938-54 period (Table 2)

The decline in the use of butter has been one major cause of the decline in total dairy consumption. Margarine has been the nemesis of butter. The price competition of margarine has probably been of major importance in reducing butter consumption. Whether price was the chief cause or whether

a combination of factors including price, availability and flavor operated in the market the fact is that margarine is replacing butter and the resulting hardships on the industry is evident. In 1942, 35 per cent of the total milk produced in the United States was utilized in the production of butter, while 40 per cent was used as fluid milk and cream (10, pp. 15, 16).

In 1954, 27 per cent of the total milk production was utilized in the production of butter, while 46 per cent was used as fluid milk and cream. During 1942 the per capita consumption of butter and fluid milk and cream was 15.7 pounds and 354 pounds respectively, but declined in 1954 to 9.0 pounds and 352 pounds respectively.

This decline in the use of butter has necessitated divergence of some fluid milk from the production of butter to use as fluid milk and cream or production of other manufactured dairy products. Meanwhile, per capita consumption of fluid milk and cream has failed to increase proportionately and, even though the per capita consumption of some other dairy products has increased, the amount has not been sufficient to utilize the total amount of fluid milk produced.

Other factors have also operated to hold down per capita consumption of dairy products. One factor is the apparent trend away from consumption of animal fats. In 1942 the per capita consumption of food fats and oils of animal origin was 27 pounds, while the per capita consumption of those fats and oils from vegetable origin was 18 pounds. In 1949 the per capita consumption of food fats and oils of animal origin had declined to 21 pounds while the per capita consumption of fats and oils of vegetable origin had increased to 22 pounds (5, p. 1985).

The increased competition of other substitutes during the past two decades limited the amount of increase in consumption of dairy products.

This has been particularly true with regards to fluid milk. The competition from coffee and soft drinks has been apparent, and the rise in per capita consumption of these beverages has undoubtedly had the effect of restricting fluid milk consumption. The soft drink industry has realized a phenomenal increase in per capita consumption during the past two decades.

In 1954 the per capita consumption of soft drinks totalled 174 bottles. This was three bottles below the previous year all-time high, but was 125 per cent above the 1935-39 average of 77 bottles (11). Per capita consumption of coffee in 1953 of 17 pounds was the same as in 1952, but was 2.0 pounds less than the high year of 1949 when 19 pounds were consumed. The 1953 total was 19 per cent above the 1935-59 average of 14 pounds (6, p. 86). Per capita consumption of fluid milk in 1954 totalled 299 pounds. This was the same as two of the preceding three years but was only 13 per cent above the 1935-39 average of 264 pounds (10, p. 16).

The American people in 1954 realized the largest personal disposable income in our history. Using an index with the years 1947-49 as a base period equalling 100, the total personal disposable income for 1954 was 139. This culminated 12 years of continued annual increase in disposable income. This total was considerably above the 1935-39 average of 39 and surpassed the 103 average for the period 1943-53 by 34 per cent (2, p. 7). The benefit of this increase in disposable income has been somewhat lessened during these years by a continual lessening of the purchasing power of the dollar. Using an index of consumer prices and the same base year 1947-49 as equalling 100, the purchasing power of the dollar reached the lowest level during this period in 1953 when its value cropped to 87 cents. This was considerably below the 1935-39 average level of 167 and was 23 per cent below the 1943-53 average of 107 (6, p. 16).

Per capita consumption of milk has shown irregular fluctuations during this period exhibiting no direct correlation with changes in the purchasing power of the dollar and personal disposable income.

Fluid milk prices during this period remained relatively stable, indicating that lack of higher per capita consumption cannot be attributed to inflated milk prices.

Professor Merrell DeGraff of Cornell University points out that:

> In the inflationary period of the past 15 years milk prices at retail have risen less than the prices of all food, so that milk is now a comparatively better buy than in those 'good old days' of low prices. In 1935-39, one hour of industrial wages would buy 4.8 quarts of milk at retail price. Today this figure is 7.2 quarts (12, p. 4).

Despite this apparent price advantage, per capita production of milk has continued to surpass per capita consumption of total milk equivalents.

The surplus problem. The continuing disparity between per capita production and per capita consumption has resulted in an annual surplus of dairy products. Under a free market situation such an increase in supply over demand would tend to depress the price of the product until a level of equalibrium was reached, at which the demand would be sufficient to clear the market of the supply. However, the market situation of the dairy industry has not been a free one. Since early in the 1930's, the Federal Government has carried on price support programs in varying degrees which have prevented the regulation of price by the forces of supply and demand. Under these programs, the Federal Government has established a guaranteed price for fluid milk and milk products which has resulted in a "price floor," below which prices cannot decline regardless of the supply or demand for the product. As a result of these price support programs, the Federal Government has, during various years, purchased the annual production surplus which has now

Table 1. Number of milk cows, pounds of milk produced and pounds of milk produced per cow, United States and Utah, 1938-54.

	Number of cows[1]		Total Pounds Milk Produced		Production per cow	
Year	U. S.	Utah	U. S.	Utah	U. S.	Utah
	1,000 Head		Million Pounds		Pounds	
1938	23,717	95	107,255	522	4,522	5,500
1939	23,923	96	108,558	538	4,538	5,600
1940	23,684	96	109,510	550	4,624	5,730
1941	24,361	101	115,498	592	4,741	5,860
1942	25,167	107	119,240	629	4,738	5,880
1943	25,663	112	117,017	655	4,598	5840
1944	25,913	117	117,023	690	4,572	5,900
1945	25,329	117	119,828	710	4,787	6,070
1946	24,475	110	117,697	672	4,886	6,110
1947	23,825	106	116,814	657	5,007	6,200
1948	22,933	104	112,671	661	5,044	6,360
1949	22,745	105	116,103	669	5,272	6,370
1950	21,944	100	116,602	655	5,314	6,550
1951	21,616	100	114,841	657	5,313	6,570
1952	21,550	101	115,117	662	5,329	6,550
1953	22,224	105	121,200	693	5,447	6,600
1954	22,532	107	125,000[2]		5,500	
AVERAGE	23,653	105	115,881	638	4,955	6,006

1. Cows and heifers milked during the year
2. U. S. D. A. estimate.

Source: U. S. D. A. Agricultural Statistics 1938-53.
U. S. D. A. Milk cows on farms, 1954.
U. S. D. A. The Dairy Situation, April 1954 and August 1954.
U. S. D. A. Office of Agricultural Statistician, Salt Lake City.

Table 2. Per capita milk production and consumption of dairy products, United States, 1924-54.

Year	Milk Prod. Per Capita lbs.[1]	Per Capita Consumption of Dairy Products[2]								
		Fluid Milk & Cream lbs.	Butter lbs.	Cheese lbs.[3]	Evap. Milk lbs.	Cond-ensed Milk lbs.[4]	Dry Whole Milk lbs.	Non-fat Dry Milk Solid	Ice Cream Gal.	Total Milk Equiv-alent lbs.[5]
1938	815	329	16.4	5.8	15.4	1.6	.1	2.1	2.2	785
1939	816	332	17.2	5.8	16.1	1.5	.1	2.1	2.3	813
1940	828	331	16.7	5.9	17.3	1.8	.1	2.2	2.4	807
1941	863	334	15.8	5.8	16.6	1.7	.2	2.4	2.9	791
1942	879	354	15.7	6.3	16.3	1.9	.2	2.5	3.3	821
1943	856	371	11.7	4.9	16.9	1.7	.4	2.1	2.8	740
1944	846	381	11.8	4.8	13.6	1.9	.3	1.5	3.1	752
1945	856	399	10.8	6.6	16.1	1.9	.4	1.9	3.4	777
1946	832	389	10.4	6.6	16.8	1.5	.5	3.2	5.0	775
1947	810	369	11.1	6.8	17.9	2.1	.4	2.9	4.3	758
1948	768	355	9.9	6.8	18.1	1.7	.3	3.3	3.9	714
1949	778	352	10.4	7.2	17.6	1.9	.2	3.2	3.7	724
1950	769	349	10.6	7.6	17.9	1.9	.3	3.6	3.6	731
1951	744	352	9.5	7.1	16.0	2.0	.4	4.6	3.7	694
1952	734	352	8.6	7.5	15.5	1.9	.4	4.6	3.7	688
1953	759	350	8.6	7.4	15.2	2.0	.3	4.1	3.7	707
1954	760	352	9.0	7.7	14.6	1.8	.1	4.6	3.5	700
AVERAGE	806	354	12.0	6.5	16.3	1.8	.3	3.0	3.4	752

1. Farm Milk Production in relation to census July 1 population, including Armed Forces overseas.
2. Data for 1941-54 are civilian consumption only.
3. All cheese except full skim, cottage, pot and leakers.
4. Case and bulk.
5. Whole milk equivalent, fat solids basis.

Source: Milk Production on Farms and Statistics of Dairy Plant Products, 1954, United States Department of Agriculture, Agricultural Marketing Service, February 1955.

given them possession of huge stockpiles of surplus dairy products.

These price support operations were originally instituted during the early 1930's. Government surplus purchases during this period were low as compared to the post-war period, with the exception of 1938 when 2,916 million pounds of whole milk equivalents were purchased (Table 3). Legislative authorization for price support operations during the war years was made under the provisions of the Steagall Amendment,[1] but were never carried out.

During most of the war-time period of price controls the Federal Government made direct payments to milk producers on milk and butterfat sold by them. The Government also made subsidy payments to cheese manufacturers on cheddar cheese production and payments to milk handlers on fluid milk in certain markets. The purpose of these payments was to increase the returns to dairy farmers in order to help them maintain production of milk to meet war-time requirements without an increase in the price ceilings on milk and other dairy products. Dairy production rose rather sharply during the migration of labor from the farms to more promising non-farm opportunities.

The early post-war years saw a sharp decline in total production from the all-time high of 1945 to the post-war low of 1948. During this period there were no government price support purchases, even though provisions for such were contained in the Steagall Amendment and the Agricultural Act of 1948.[2] In 1949, however, the government purchased 2,541 million pounds of

1. This amendment provided that if the Secretary of Agriculture announced that an increase in the production of an agricultural commodity was necessary for the war effort, he must support prices to producers for that commodity for a specified period following the end of hostilities at not less than 90 per cent of parity.
2. This act in effect extended the Steagall Amendment and required the Secretary of Agriculture to support prices to producers for milk and butterfat at 90 per cent of parity through 1949.

whole milk equivalents of butter, cheese and nonfat dry milk solids (Table 3). This total was increased to 3,666 million pounds in 1950. During these same two years milk production dropped 1,761 million pounds and 1.485 million pounds respectively below the 1950 total.

The slight production increase accomplished in 1952 came in the latter part of the year when a substantial expansion in total production began. This expansion continued in 1953 resulting in an all-time high (at that time) in total milk production of 121,200 million pounds. Dairy herds increased only three per cent but per cow production increased by 118 pounds (Table 1). Government purchases during 1953 totalled an all-time high of 9,981 million pounds of whole milk equivalents. In 1954 the trend continued with total production reaching a new all-time high and government purchases threatening the all-time high mark of 1953, having purchased 8,972 million pounds of milk equivalents in the first seven months of 1954 (Table 3).

The perishable nature of fluid milk has necessitated storing the dairy surpluses in less perishable forms. Since 1949 all dairy surplus purchases have been in the form of nonfat dry milk solids, butter and cheese. Purchases in the form of nonfat dry milk solids have continually represented the largest portion of the total dairy surplus purchases. During the period 1949-54, the Federal Government had purchased a total of 1,982,494 pounds of nonfat dry milk solids, which was 54.8 per cent of the total pounds of dairy products purchased (Table 3).

The cost of administering this program has been great. Much of the dairy surpluses purchased during this period have been disposed of by the Federal Government through their disposal program which has been carried on simultaneously with their purchase operation. As of June 30, 1954, the total realized cost of stabilizing dairy farm prices through these purchasing programs

was 521.1 million. This represented approximately six per cent of the 8,149.1 million dollar cost[1] incurred in administering the over-all agricultural price support program (Table 4).

The complexity of the surplus problem is as great today as in any time during recent years. Faced with the largest milk production potential in our history, the nation must deal simultaneously with the tremendous warehouse stocks of dairy products remaining in storage. Government stocks as of March 31, 1954, totalled 365 million pounds of butter, 483 million pounds of cheese, and 598 million pounds of nonfat dry milk solids (14).

> These holdings by the government were the equivalent of 11 billion pounds of whole milk. These inventories, it may be noted, represent less than half the decline in total per capita consumption between 1939 and 1954 (14, p. 11).

In other words, had the American people consumed dairy products in 1953 at the same per capita rate as in 1939, they would have utilized approximately 19,840 billion additional pounds. Instead of an 11 billion pound surplus in Government hands, there would have been an 8.8 billion pound shortage (14, p. 12). Clearly, there is a fundamental need for an approximate equating of dairy production and consumption.

Merchandising as a solution. Secretary of Agriculture Ezra Taft Benson, in a 1953 speech before the American Dairy Association, set forth the philosophy which has characterized the present dairy program.

> There is no overall surplus of dairy products. Actually there exists a great shortage of milk to meet our full needs. What we have is a lack of adjustment to the markets so that not all butter, cheese and dried milk is being consumed. If the adjustments are made ... the surplus problem will be gone (3, p. 15).

Acting with this philosophy as a basis the dairy industry has embarked on a merchandising program designed to "sell" milk to the public and thus

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1. Totals do not include interest and administrative costs. They do include, however, cost for storage, transportation and handling.

Table 3. Purchases of dairy products by the Federal Government 1933-41 and 1949-51.

Year	Butter[1]	Cheese[2]	Evaporated Milk	Nonfat dry milk solids	Whole milk Equivalent Purchases
	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.	million lbs.
1933	43,234[3]				869
1934	24,624[4]	17,936[5]	400[6]		675
1935	7,055	192	47,027	15,840	244
1936	2,951	932	6,160	3,594	82
1937	3,049[7]	138[8]	19,636	23,188	104
1938	141,979	3,463	19,470[9]	31,260	2,916
1939	25,398		3,209	5,035	515
1940	10,604	4,354	65,903	7,317[10]	397
1941	11,454		4,350		238
1949	114,273	25,526		325,493	2,541
1950	127,905	108,944		351,641	3,666
1951	221	828		53,457	13
1952	16,065	2,789		51,494	348
1953	358,909	291,043		587,431	9,981
1954 Jan-Sept.	319,344	268,187		612,978	8,973

1. Includes purchases by the Dairy Products Marketing Association
2. American cheese unless otherwise specified.
3. Includes 11,951,046 pounds purchased by Land O'Lakes prior to mid-October.
4. Includes 5,908,020 pounds purchased with Federal Surplus Commodities Corporation funds early in 1934.
5. Includes Swiss cheese purchased in August.
6. Purchased by F.S.C.C. during 1934.
7. Includes 36,525 pounds purchased by F.S.C.C. under State Programs for flood relief.
8. Purchased by F.S.C.C. with State funds.
9. Includes 435,000 pounds purchased with State funds by F.S.C.C. in September and October.
10. Acquired for relief distribution by the Surplus Marketing Administration

Source: The Dairy Situation, October 18, 1955, United States Department of Agriculture, Agricultural Marketing Service.

Table 4. Realized cost of program for stabilization of dairy farm prices and income distributed by fiscal years.

Commodity	1932-1949	1950	1951	1952	1953	1954	Total
			Millions of dollars				
Butter	80.2	16.9	44.2		17.5	94.5	253.3
Cheese	3.0	1.0	24.0		0.7	35.4	64.1
Milk	39.5	17.4	42.7	5.4	9.2	89.5	203.7
Total	122.7	35.3	110.9	5.4	27.4	219.4	521.1*
Total Agr. All Commodities		411.1	563.5	270.4	247.4	872.8	8,149.1

*Totals do not include interest and administrative costs. Include cost for storage, transportation and handling.

Source: Appendix to table of "Realized Cost of Agricultural and Related Prices by Function or Purpose, Fiscal Years 1932-1954." U. S. Department of Agriculture. March 1955.

increase total consumption. Such a program is new to the dairy industry. For years the characteristic attitude of the industry has been one of believing that the need for milk in the daily diet was enough to maintain sufficient demand and that no other "selling" measures were necessary. Now there has been a shift in attitude and the industry is attempting to equate dairy production and consumption, primarily by means of increased consumption.

Increasing consumption has been favored over decreasing production by most dairy leaders as a means of resolving the dairy problem. The increase in health standards for the nation as a whole which may result from increased milk consumption is pointed to by many as a very desirable consequence. Then, too, it is pointed out that there is a very definite market for increasing total consumption. Primarily the adult population provides this market. Professor Herrell DeGraff of Cornell University points out that

> Among our adult population, those over 21, hardly more than one-quarter continue to be regular milk drinkers. About half of the adult population seldom or never drink milk (14, p. 20). ...Nearly two-thirds of our population, however, are at ages 20 years and more. This represents approximately 102 million milk consumers or potential milk consumers (14, p. 21).

In advocating increased consumption as a solution to the problem, many industry leaders have pointed to the desirability of placing special emphasis on increasing consumption of fluid milk. The presence of a two-price system for milk in the dairy industry is one reason for this proposal. Since the Class I price for market milk is considerably higher than that of the Class II price for manufacturing milk, the cash return to the market milk producer is proportionately higher. By effecting a general increase in the consumption of market milk, the dairy industry would have to supply

additional amounts to meet this increased demand. This would mean an expanding market for those already producing market milk and would undoubtedly necessitate certifying additional market milk producers. With more producers realizing larger cash returns, the dairy industry as a whole would realize a greater total cash return for its products and thus make progress toward one of its ultimate goals--increased prosperity.

Future population increases also lend weight to the proposal for increasing consumption. Latest projections by the Bureau of Census place our population in 1975 at approximately 207 million people (8, p. 36). In general, this means an expanding market for the dairy industry as well as other industries. At the present rate of per capita consumption of 700 pounds (Table 2), our production must increase to an annual output of 144.9 billion pounds to provide our 1975 population with the same level of per capita consumption we have today. This is an increase of 16 per cent over the estimated total production of 125 billion pounds in 1954.

Should present efforts to increase per capita consumption be successful, the dairy industry can benefit from their program of attempting to increase per capita consumption. The consumption pattern of our future population will not be constant. Just as in the past the changing consumption desires of the consuming public will influence the level of per capita consumption of dairy products. Through a program designed to increase per capita consumption, the dairy industry, even though unsuccessful in their attempts to raise per capita consumption, can insure more fully the maintenance of present levels of consumption and thus lessen the possibility of any future declines.

In attempting to realize an increase in total consumption, the dairy industry has placed special emphasis on the need for effective merchandising.

They have followed the philosophy of Secretary Benson and are attempting to bring about an "adjustment of the market" through effective merchandising. The industry is now actively competing for the consumer's dollar and the need for merchandising as a partial solution is very real.

Changes in the pattern of milk utilization have intensified this need for merchandising. In 1924, 27 per cent of the total milk produced was utilized on the farm while the remaining 72 per cent was marketed by the farmers through plants and dealers or retailed directly by the farmer as milk or farm-churned butter. Of the total marketed by the farmers, 62 per cent was delivered to plants and dealers for subsequent distribution through retail outlets. In 1953 this pattern had changed considerably. Of the total milk produced, only 14 per cent was being utilized on the farms and of the remaining 86 per cent marketed by the farmers 83 per cent was delivered to plants and dealers for subsequent distribution through retail channels. This changed pattern has resulted in increased amounts of dairy products passing through retail outlets (9, p. 6).

Competing and substitute products are also being actively merchandised through the same retail channels in increased amounts. Coffee and tea, soft drinks, beer and other beverages, while competing among themselves, are also in very close competition with fluid milk. Other dairy products have come into direct competition with new spreads and desserts, and in many cases lie side by side with their competition in store displays and thus become very vulnerable to the impulse desires of the consuming public.

These two developments are accentuated by the increase in purchasing power of the average American. With purchasing power of most Americans at or near record levels and with the productive capacity of our economy providing milk and other goods in excess of bare subsistence levels, the

consuming public is able to exercise considerable choice in today's market, thus intensifying this competition.

Review of literature

Until the present time there have been no general studies conducted in the state of Utah to appraise consumer reaction toward dairy product advertising. Dairy studies have been conducted in other areas of the United States but, to the best knowledge of the author, none have been directed at the appraisal of dairy advertising effectiveness. In general, these dairy studies have been conducted to analyze various factors which influence per capita consumption of fluid milk and dairy products. Some of these studies parallel the study conducted by this author. However, it is felt that these studies may not represent the market situation in Utah (see conclusion to this section).

In 1950 a study was conducted in the Seattle, Washington, area. The main objective was to determine the extent to which the consumption of milk and other dairy products was related to income, household size, age, education of homemaker, sex, ethnic background and race (13). This study showed that the number of persons in the household was significantly related to total milk consumption while household income showed no significant relationship. Males were found to consume significantly greater amounts of fluid milk than did females. The number of non-drinkers of milk was less among males than among females. Cottage cheese consumption increased with increased family income but decreased with increased family size. Both the household size and income were significantly related to the consumption of butter.

A study conducted in Memphis, Tennessee, was designed to obtain information which would be helpful to the milk industry in evaluating the reaction of consumers to the impact of price reductions and promotional activities (3).

The study was conducted in 1952 and again in 1953 using, as near as was possible, the same sampling area and respondents. The study revealed that the increased sale of milk accomplished during this period was accompanied by price reductions and increased sales promotion activity. Only seven per cent of those interviewed indicated an awareness of the fluid milk lower prices, while 66 per cent indicated an awareness of increased advertising. It was concluded, therefore, that reduced prices played a minor role in increasing total fluid milk consumption and that consumption might have been increased still more had the promotional activities been directed so as to make more people aware of the price reductions which had occurred.

Perhaps the most widely used study on this subject was the study made by Alfred Politz Research, Inc. for the American Dairy Association in 1953 (1). This study was designed primarily to investigate the consumer market for its characteristics, behavior and attitudes relating to beverages, milk, butter and oleomargarine, cheese and ice cream. This was a nation-wide survey. The study revealed that the use of milk declines with advancing age and that children under 15 years of age, who represent one-fourth of the total population, drink approximately one-half of the milk consumed. Coffee was found to be the most common beverage in the adult diet with approximately twice as many adult respondents drinking that beverage as drink milk. Milk was the second most common beverage in the adult diet. Those drinking more coffee and tea were doing so because they liked the taste, while those who were drinking less of these beverages were doing so because they did not think it was good for their health. The reasons for consuming milk were reversed. Those drinking more milk were doing so because they felt it was good for their health, while those drinking less were abstaining because they disliked the taste or felt milk was fattening.

Those using more nonfat dry milk were doing so primarily because it was cheaper, while those using less of it did so because they "disliked the taste." More than half of those interviewed had never tried using nonfat dry milk solids. Inquiries concerning the believability of milk claims showed that the majority of both drinkers and non-drinkers of milk believed that milk was good for bones and teeth and supplied the body with energy. The majority of these groups, however, had some doubts about claims that milk was not fattening and that it helps their eyesight. About one-half of each group believed that milk was good for digestion, that it helps them sleep, and helps their complexion.

Another very extensive study was conducted in the Oakland, California and Los Angeles, California areas. The objective of this study was to analyze various factors which influence per capita consumption of dairy products in these urban areas. The results of this study were summarized in eight separate issues of "California Agriculture" magazine (3). These summaries included discussions of (1) relationship of dairy expenditures to total food expenditures, (2) use of dairy products in the diet, (3) consumer buying habits and distribution of dairy products, (4) average family consumption of dairy products, (5) per capita consumption in relation to income, age and family size, (6) seasonal use of dairy products, (7) seasonal expense and source of dairy products and (8) utilization of dairy products by the family.

The study showed that the families interviewed spent from one-fifth to one-sixth of their total food dollar for dairy products and that families which spent the most for dairy products and food had the largest families. Slightly over 50 per cent of the total amount spent for dairy products was spent for fluid milk. Dairy products were found to contribute a large share of the food nutrients recommended by the National Research Council.

Fluid milk was found to be the most frequently used dairy product, being used in one form or another by 90 per cent of the families interviewed. The number of families using fluid milk did not vary much from one income group to another, while those using half and half milk, cottage cheese, cheddar cheese, ice cream and butter tended to increase with increased family income. The use of evaporated milk tended to decrease with increased income. Families with children under 16 years of age were found to consume twice as much fluid milk as did families with children above this age. Consumption of other dairy products was also higher among the families with younger children, but the difference was not nearly so great.

Total consumption of dairy products was greater in the summer than in the winter. Consumption of some individual dairy products, however, showed opposite seasonal variation to the general trend with frozen desserts exhibiting the greatest difference. Total seasonal expenditures for dairy products paralleled the seasonal consumption trends with more money being spent for these products in the summer.

Almost all of the families using fluid milk were found to use it in food preparation. From 10 to 15 per cent was consumed in this manner, with the largest portion being used in baked goods. Two to three per cent of the total milk consumed was consumed in tea and coffee. Of the 68 per cent of the families who used cottage cheese, 37 per cent used it in the preparation of salads, while 31 per cent served it alone at the table.

Conclusion

The applicability of these studies to the state of Utah may or may not be valid. The factors which influence per capita consumption in Utah will not be consistent with the factors which influenced per capita consumption in these other areas. The influence of religious beliefs, the rural-urban

population ratio, the area standard of living level, the educational standards and availability of products are some of the influences which may vary between areas and thus influence such data. The variation in these many influences make it very difficult to use per capita data from one area to explain per capita conditions in another area. The most valid per capita analysis can generally be derived from data obtained from the area being analyzed. Then too, such an analysis must be qualified because the situation reported is characteristic only of the time period studied. The situation reported in such an analysis may persist for some time since group change is much slower than individual change, but even in applying the analysis to the area studied, one must consider the time interval and possible group changes.

Therefore, one should not assume that the findings of the preceding studies are characteristic of Utah. These studies are useful in this area to point up conditions which exist in other areas, to bring attention to conditions which might exist in Utah, and to use as a guide in preparing similar studies and analysis for Utah.

SOURCE OF DATA AND METHOD OF PROCEDURE

The data used in this study were obtained from 1200 housewives and male heads of households in the state of Utah between March 15, 1955, and May 31, 1955. The data were drawn in various size towns from the counties listed in Table 5. The towns and number of samples drawn from each are included in Table 6.

Information received from personal interview with prominent men in the dairy industry in Utah, as well as other men associated with the industry, was partially utilized in constructing the sample questionnaire. The questionnaire was pre-tested by the author before actual drawing of the sample commenced.

The sample size was set at 1500 respondents after consultation with statisticians at Utah State Agricultural College. This number was later reduced to 1200 respondents when the 300 samples to be drawn from towns of less than 200 total population were omitted. This limitation was deemed necessary because of the higher cost of obtaining these rural records and the limited time and budget available for conducting this study. The towns in the state were categorized by total population as follows: below 200 population, 200-500 population, 501-1500 population, 1501-2500 population, 2501-5000 population, 5001-10,000 population, 10,001-30,000 population, 30,001-60,000 population and above 60,000 population. The apportionment of the total sample was made to these population categories on the basis of the percentage that each category was of the total population included in all categories (Table 5).

The towns to be sampled within each category were selected on the basis of geographical location. Location criteria included: (1) location for most economical travel in drawing the sample, and (2) location within general state areas so as to provide, as nearly as possible, a representative sample of each population category from each general state area (Table 6). The number of samples apportioned to each sample town within each population category was determined by the percentage each sample town's population was of the total population of the sample towns within each category. This procedure was followed in apportioning samples in population categories with more than 1500 total population. In the population categories of 200-500 and 501-1500 populations, each sample town was apportioned the same number of samples, except where left-over samples resulted, in which case the sample towns with the larger populations were apportioned one extra sample in descending order of total population (Table 6).

Those interviewed were selected at random as found in a house-to-house tour of each town sampled. In the larger towns of the state--Salt Lake, Provo, Ogden and Logan--maps were used and the aid of real estate firms enlisted to determine the relative income level of city areas on the basis of real estate value. This procedure was followed in an attempt to gain a representative sampling of all income groups listed on the questionnaire.

The sample was drawn by means of personal interview conducted by the author and his associates with the aid of a preconstructed questionnaire. The use of the personal interview was deemed to be superior to that of the mail questionnaire for this type study. This conclusion resulted from an experimental mail questionnaire study which is summarized in the Appendix of this paper.

Table 5. Apportionment of total sample by population category and general state area, 1200 respondents, consumer opinion survey, Utah. 1955.

Population Category Below 200	Population of Category	% Population Category is of Total Population	Total Samples Taken in Category
200-500	135,168	05	75
501-1500	34,451	05	128
1501-2500	40,736	06	90
2501-5000	60,400	09	135
5001-10,000	74,071	11	164
10,001-30,000	45,769	06.5	98
30,001-60,000	57,112	08	120
Above 60,000	182,121	26	390
TOTAL	668,862	100	1500*

GENERAL STATE AREA I:

Cache County
Box Elder County
Rich County

GENERAL STATE AREA II:

Weber County
Davis County
Morgan County

GENERAL STATE AREA III

Salt Lake County
Tooele County

GENERAL STATE AREA III

Utah County
Wasatch County

GENERAL STATE AREA V

Uintah County
Duchesne County
Summitt County
Daggett County

GENERAL STATE AREA VI

Emery County
Grand County
Wayne County
San Juan County
Garfield County
Kane County

GENERAL STATE AREA VII

Carbon County
Sanpete County
Sevier County
Millard County
Juab County

GENERAL STATE AREA VIII

Beaver County
Piute County
Iron County
Washington County

*300 samples in population category below 200 population were eliminated due to high cost of obtaining and limited time and budget available.

Table 6. Number of samples per population category and town surveyed, 1200 respondents, consumer opinion survey.

Town Surveyed	Town Population	% Town Pop. of Total Pop.	Samples Taken	General State Area
		Population Category 200-500		
Wallsburg			9	IV
Junction			9	VIII
Uintah			9	II
Paradise			9	I
Stockton			9	III
Myton			10	V
Kanosh			10	VII
Emery			10	VI
TOTAL			75	
		Population Category 501-1500		
Marysvale			8	VIII
Wellsville			8	I
Honeyville			8	I
Centerfield			8	VII
Midway			8	IV
Castle Dale			8	VI
Duchesne			8	V
Plain City			8	II
Draper			8	III
South Jordan			8	III
Morgan			8	II
Moroni			8	VII
Richmond			8	I
Huntington			8	VI
Santaquin			8	IV
Parawon			8	VIII
TOTAL			128	
		Population Category 1501-2500		
Lewiston	1533	11	10	I
Grantsville	1537	11	10	III
Roosevelt	1628	12	10	IV
Tremonton	1662	12	11	I
Riverton	1666	12	11	III
Fillmore	1890	13	12	VII
Sandy	2095	14	12	III
West Jordan	2107	15	14	III
TOTAL	14118	100	90	

Table 6 (continued)

Town Surveyed	Town Population	% Town Pop. of Total Pop.	Samples Taken	General State Area
Vernal	2845	09	12	V
Helper	2850	09	12	VII
Heber	2936	09	12	IV
Nephi	2990	09	12	VII
Dragerton	3453	11	15	II
Layton	3456	11	15	IV
Payson	3998	13	18	IV
Richfield	4212	14	19	VII
Clearfield	4723	15	20	II
TOTAL	31463	100	135	
	Population Category 5001-10,000			
Orem	8351	21	35	IV
Tooele	7269	18	29	III
Brigham	6790	17	29	I
Cedar City	6106	15	24	VIII
Price	6010	15	24	VII
Bountiful	6004	14	23	II
TOTAL	40530	100	164	
	Population Category 10,001-30,000			
Provo	29000	63	61	IV
Logan	17000	37	37	I
TOTAL	46000	100	98	
	Population Category 30,0001-60,000			
Ogden	57112	100	120	II
TOTAL	57112	100	120	
	Population Category Above 60,000			
Salt Lake	182121	100	390	III
TOTAL	182121	100	390	

The completed records were coded by the author and his associates and the final tabulation of returns accomplished by the IBM Department of Utah State Agricultural College.

Characteristics of the sample

Female respondents represented the largest number of the total respondents interviewed. Of the 1200 respondents interviewed, 1115 or 93 per cent were females. The age groups of 31-40 years included the highest number of respondents of any single age group, totalling 383 or 32 per cent of the total sample. The age group 21-30 ranked second with 328 or 28 per cent of the total sample, with age group 41-50 years next with 225 or 19 per cent. Those respondents over 50 totalled 208 or 18 per cent, while the 31 respondents under 20 represented only three per cent of the total sample. Twenty-five respondents would not give their age.

Ninety-four per cent of 113 respondents were married, while only 29 respondents or two per cent had never been married. Widowed or divorced respondents represented the remaining four per cent. Of those married, 31 per cent had been married over 20 years, while 16 per cent had been married five years or less. Twenty per cent had been married from six to ten years, 17 per cent had been married 11 to 15 years, and 16 per cent had been married 16 to 20 years. White respondents represented 97 per cent of the total sample, with Negroid respondends representing the remaining three per cent.

Fifty-seven per cent of the respondents indicated family income of $3,000 to $5,000 annually. Nineteen per cent had an income of less than $3,000 annually. Eighteen per cent earned $5,000 to $7500 during the year, while six per cent realized annual incomes of more than $7500. Non-farm income represented the most common source of income, totalling 1,073 or

90 per cent of the sample total. Farmers engaged in dairying, either full or part time, numbered 27 and represented two per cent of the total sample, while farmers engaged in farming other than dairying, either full or part time, totalled 99 and represented the remaining eight per cent.

Families totalling three to four in number represented the largest number. Of the 1198 families who responded, 535 or 45 per cent were included in this category. Those families having five to six in number totalled 332 or 28 per cent, while those with two or fewer members totalled 242 or 20 per cent. Families numbering over six members totalled 89 and represented seven per cent of the total sample. A total of 4,828 people were included in the total families contacted.

Age composition of the household members showed 981 families or 81 per cent of the sample had two adults. Fourteen per cent of the families had three or more adults, while only five per cent reported one adult. Eight hundred and twelve families or 68 per cent reported having no children in age group 12 to 18 years. Eighteen per cent had one child and ten per cent had two children in this age group. Only four per cent of the families had three or more children in this age group. Children were more numerous in the age group under 12 years. Only 416 families or 35 per cent of the sample reported no children in this age group. Twenty-one per cent reported one child in this age group, while 25 per cent had two. Nineteen per cent had three or more children in this age group.

FINDINGS AND ANALYSIS

Advertising

Purpose. The purpose of this section is to analyze respondent observance of dairy advertising and their attitudes and opinions regarding its effectiveness, the advertising media most preferred, and the most effective advertising methods. The data were obtained as described in the preceding section of this paper. The questions asked were subjective in nature and may not have measured what the respondent actually does in a given situation. Since respondent stated opinion and conduct may not always be correlated, limitation and careful judgment should be exercised when interpreting the results of this study.

Respondent attitudes toward the effectiveness of dairy advertising. Respondent attitudes toward the effectiveness of dairy advertising were examined by asking them if advertising fluid milk and other dairy products encouraged their use of these products.

The majority of respondents felt that advertising fluid milk did not encourage them to use it. Of the 850 respondents who replied, 70 per cent indicated that advertising fluid milk did not encourage their use of this beverage, while 30 per cent felt that such advertising had encouraged its use in their households. Attitudes were more favorable toward the advertising of other dairy products (cottage cheese, powdered milk, ice cream, etc.). Forty-eight per cent of the respondents felt that advertising these other dairy products did not encourage their use, while 52 per cent believed they were encouraged by advertising to use these products.

The percentage of respondents who felt that advertising fluid milk encouraged its use tended to increase with family income (Table 7). However,

a higher percentage of respondents with family income of $5,000 to $7,500 were encouraged by fluid milk advertising than were those in other income groups. Thirty-six per cent of those who felt they were encouraged by fluid milk advertising were included in this income group, while the other income groups included from 25 to 31 per cent. This tendency on the part of low and high income groups to be less affected by advertising may be due to the inelastic nature of their demand. Low income groups tend to be price conscious and purchase items which are priced at the level which will maximize their lower incomes. High income groups, on the other hand, tend to purchase items with less regard for any such commodity characteristic. This purchasing trait may tend to minimize the effect of advertising on these groups.

Table 7. Relationship between income and respondents' attitudes toward advertising of fluid milk, 840 respondents, consumer opinion survey, Utah, 1955.

Family income	Does advertising of fluid milk encourage you to use it?					
	All respondents		Yes		No	
	Number	Per cent	Number	Per cent	Number	Per cent
(dollars)						
Under 3,000	161	100	39	25	122	75
3,000-5,000	473	100	143	30	330	70
5,000-7,500	149	100	53	36	96	64
Over 7,500	55	100	17	31	38	69
TOTAL	838*	100	252	30	586	70

*12 No reply.

A similar relationship was found between respondent opinions toward advertising other dairy products and family income (Table 7a).

Table 7a. Relationship between income and respondent attitude toward advertising other dairy products--840 respondents, consumer opinion survey, Utah, 1955.

Family Income	Does advertising other dairy products encourage you to use them					
	All respondents		Yes		No	
	Number	Per cent	Number	Per cent	Number	Per cent
(dollars)						
Under $3,000	160	100	70	43	90	57
3,00-5,000	474	100	252	53	232	47
5,000-7,500	150	100	84	56	66	44
Over 7,500	56	100	28	50	28	50
TOTAL	840*	100	434	52	406	48

* 10 No Reply

Dairy advertising appealed least to the older respondents (Table 8). The percentage of respondents who were encouraged by advertising to purchase fluid milk tended to decrease with an increase in age of the respondent. Approximately one-third of these respondents under 40 years of age felt that advertising fluid milk encouraged them to use it. Less than one-fourth of those over 40 years of age believed they had been encouraged.

Table 8. Relationship between respondent age and respondent attitude toward advertising fluid milk--840 respondents, consumer opinion survey, Utah, 1955.

Respondent Age	Does advertising fluid milk encourage you to use it?					
	All respondents		Yes		No	
	Number	Per cent	Number	Per cent	Number	Per cent
(years)						
16-20	17	100	2	12	15	88
21-30	227	100	84	37	143	63
31-40	283	100	95	34	188	66
41-50	159	100	47	25	112	75
Over 50	144	100	20	14	124	86
TOTAL	830*	100	248	30	582	70

* 20 No reply.

A similar relationship was found between respondent age and respondent attitude toward advertising other dairy products (Table 8a). Approximately 60 per cent of the respondents under 40 years of age felt advertising other dairy products had encouraged their use, while only about 40 per cent of those over 40 years of age felt they had been encouraged.

Table 8a. Relationship between respondent age and respondent attitude toward advertising other dairy products--840 respondents, consumer opinion survey, Utah, 1955.

Respondent Age	Does advertising other dairy products encourage you to use them?					
	All respondents		Yes		No	
	Number	Per cent	Number	Per cent	Number	Per cent
(years)						
16-20	23	100	8	35	15	65
21-30	227	100	135	69	92	31
31-40	284	100	165	58	119	42
41-50	159	100	77	51	82	49
Over 50	146	100	47	32	99	68
TOTAL	839*	100	432	52	407	48

* 11 No Reply.

Most of both those who buy their milk at the store and those who have it delivered feel that advertising fluid milk does not encourage its use in their homes (Table 9). Approximately two-thirds of the respondents who obtained their milk from these two sources gave this reply. However, of those who feel that advertising fluid milk encourages them, more buy it at the store than have it delivered. Those who own their own cow are the group least affected by fluid milk advertising. Only 19 per cent of those who own their own cow feel that advertising fluid milk encourages them, while 81 per cent believe they are not affected.

Table 9. Relationship between source of fluid milk and respondents' attitude toward advertising fluid milk--consumer opinion survey, 1200 respondents, Utah, 1955

Source of Milk	Total		Does advertising fluid milk encourage you to use it?			
			Yes		No	
	Number	Per cent	Number	Per cent of total	Number	Per cent of total
Delivered	333	100	88	26	245	74
Buy at store	437	100	145	33	292	67
Own cow	48	100	9	19	39	81
Neighbors who own cow	32	100	11	34	21	66
TOTAL	850	100	253	30	597	70

The tendency of fluid milk advertising to be ineffective on those who own their cow may be due to the fact that these people have their own milk available in virtually unlimited amounts for family consumption. Since they have all they want and do not purchase it from any source, they are the least concerned with fluid milk advertising and, therefore, the least likely to be affected by it. This contention is strengthened when one analyzes these respondents' attitude toward advertising other dairy products which are not produced by the respondent (Table 9a). Fifty-four per cent of those who own their own cow feel that advertising other dairy products encourages them to use these products, while 46 per cent believe they are not encouraged. These products are purchased by the respondent. Thus, he is more concerned with certain commodity characteristics, such as price, quality, etc., and therefore more likely to concern himself with advertising about these products.

Table 9a. Relationship between source of fluid milk and respondent attitudes toward advertising other dairy products--consumer opinion survey, 1200 respondents, Utah, 1955.

Source of Milk	Total		Does advertising other dairy products encourage you to use them? Yes		No	
	Number	Per cent	Number	Per cent of total	Number	Per cent of total
Delivered	333	100	161	48	172	52
Buy at store	437	100	228	52	209	48
Own cow	48	100	26	54	22	46
Neighbors who own cow	32	100	21	66	11	34
TOTAL	850	100	436	52	414	48

Advertising other dairy products was also more effective on those who buy at the store than it was on those who utilize home delivery. Fifty-two per cent of those who purchase at the store felt advertising other dairy products encouraged their use, while only 48 per cent of those who utilize home delivery believed they were encouraged. The highest percentage of those who were encouraged by this advertising, as well as fluid milk advertising, were those respondents who purchased their milk from neighbors who owned a cow.

Summary. The majority of respondents felt that they were not encouraged by advertising to purchase fluid milk. Approximately one-half, however, were encouraged to purchase other dairy products, as a result of advertising these products.

Of those who were encouraged by both types of advertising, the percentage tended to increase with family income. However, a higher percentage

of respondents with medium family income were encouraged by this advertising than were those with high or low incomes. Respondents under 40 years of age were also encouraged more by this type of advertising than were those who were past this age.

Fluid milk advertising was least effective on those respondents who owned their own cow and was most effective on those who buy at the store or from a neighbor who has a cow.[1] The majority of all these groups, however, felt that advertising fluid milk did not encourage their use.

Advertising other dairy products was most effective on those who owned their own cow or who bought from a neighbor who had a cow. A higher percentage of those who purchased their milk from the store were encouraged by this advertising than were those who utilized home delivery. The majority of all these groups, except those who had home delivery, believed that advertising other dairy products encouraged their use.

Advertising media and respondent observance of dairy advertising

The advertising media studied in this section included the radio, television and daily newspaper. Respondent replies to questions regarding the dairy advertising they could recall having seen through these three media were not solicited by any means which was suggestive to the respondent. They were asked in a direct manner to recall advertising they had observed and it is believed their answers were the ones most paramount in their minds. This method of questioning may have resulted in a lower number of positive recall responses than would have been received if a more

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1. Some limitation may be necessary when analyzing the opinions of those who own their own cow or those who buy from a neighbor who has a cow since the number of respondents in these categories represents a small percentage of the total.

suggestive method had been used. The suggestion of certain type programs, etc. might have reminded the respondent of programs and sponsors they might not have otherwise recalled.

Advertising media. Radios were found in more households than were any of the other advertising media studied, but, according to respondents, were used the least as shopping aids in purchasing food products.

Ninety-four per cent of the 1200 respondents interviewed had radios in their homes. Ninety per cent subscribed to a daily newspaper, while television owners represented the lowest total with 64 per cent of the sample owning this newest medium.

The newspaper was the medium most commonly used as a shopping aid. Twenty-one per cent of the newspaper owners said they used this medium as a shopping aid in purchasing dairy products, while 42 per cent said they used it to aid them in purchasing other food products (Tables 10 and 10a). Only seven per cent of the radio owners however said they used the radio as a shopping aid in purchasing dairy products, while 12 per cent said they used it as a shopping aid when purchasing other food products. Television was used by 14 per cent as an aid in purchasing dairy products and by 20 per cent in purchasing other food products.

This tendency on the part of the respondents to use these media more for purchasing other food products than for purchasing dairy products may be attributed to these factors: First, almost one-half of the respondents have some or all of their dairy products delivered and are, therefore, not particularly concerned with shopping for them. Secondly, dairy products are not generally a "bargain" type product which housewives look for when shopping. Most of the other food products, however, at one time or another,

Table 10. Respondent use of television, radio and newspaper as shopping aids in purchasing dairy products—1200 respondents, consumer opinion survey, Utah, 1955

	Dairy products					
	Total		Yes		No	
Media	Number	Per cent of total	Number	Per cent of total	Number	Per cent of total
Television*	760	100	104	14	656	86
Radio**	1097	100	80	7	1017	93
Newspaper	1081	100	227	21	854	79

* 3 No reply.
** 27 No reply.

Table 10a. Respondent use of television, radio and newspaper as shopping aids in purchasing other food products—1200 respondents, consumer opinion survey, Utah, 1955

	Other food products					
	Total		Yes		No	
Media	Number	Per cent of total	Number	Per cent of total	Number	Per cent of total
Television*	755	100	149	20	606	80
Radio**	1084	100	127	12	957	88
Newspaper	1081	100	454	42	627	58

* 8 No reply.
** 40 No reply.

are sold at special prices, while the price of dairy products are not usually altered by specials or sales. Thus, the housewife is more likely to watch the advertising media for notice of special prices on other food

products since she is more or less reconciled to the constant price of dairy products.

A survey of a daily Utah newspaper tends to substantiate this belief. In the September 16, 1955, issue of the Salt Lake Tribune, ten grocery store ads were analyzed. All fresh meat products were listed 51 times, coffee was listed seven times and margarine a total of six times. All dairy products, on the other hand, were listed only a total of 11 times. Broken down by commodities they were listed as follows: fluid milk, three times; (this may have been more advertising than fluid milk generally receives since all ads for this product were advertising the arrival in Salt Lake of one of Meadowgold Dairy's Television stars), canned milk, two times; processed cheese, two times; butter, two times; and cream and dry milk, one time each.

Radios were listened to in the morning more than at any other time of the day (Table 11). Approximately one-half of those who listened to the radio in the morning did so regularly, while 35 per cent were "seldom" listeners and 15 per cent only "occasionally." Television was viewed at night[1] by a large majority of the respondents. Ninety-two per cent of the respondents said they watched television mostly at night in their households (Table 11a).

Respondent observances of dairy advertising. Dairy advertising on the radio was observed by less respondents than was advertising done through the other media (Table 12). Only 29 per cent of those who owned radios recalled having heard any recent dairy advertising, while one-half of the daily newspaper subscribers recalled having seen dairy advertising in this medium. Television owners observed the most dairy advertising, with 84 per cent indicating they had viewed some dairy advertising on television in

1. Night was considered as that time from 6:00 p.m. to 12:00 p.m.

Table 11. Time of day and regularity respondent listens to radio--1200 respondents, consumer opinion survey, Utah, 1955

Time of day	Total		Seldom		Occasionally		Regularly	
	Number	Per cent of total	Number	Per cent of total	Number	Per cent of total	Number	Per cent of total
Morning	537	100	191	35	80	15	266	50
Afternoon	98	100	39	40	18	18	41	42
Night*	93	100	32	34	20	22	41	44
TOTAL	728	100	262	36	118	17	348	47

Table 11a. Time of day respondent runs television--1200 respondents, consumer opinion survey, Utah, 1955

Time of day	Number	Per cent of total
Morning	20	2
Afternoon	25	4
Night	692	92
All day	19	2
TOTAL	756**	100

* Night was considered as that time from 6:00 p.m. to 12:00 p.m.
** 7 no reply.

recent times. Of this total, six per cent could not recall specifically either the program or sponsor, while the remaining 94 per cent recalled from one to six programs and/or sponsors (Table 13). Of the 327 respondents who recalled having heard dairy advertising on the radio, 25 per cent could

not recall specifically either the program or sponsor, while the remaining 74 per cent recalled from one to four programs and/or sponsors.

Table 12. Respondent observance of dairy advertising on television, radio and in newspaper--1200 respondents, consumer opinion survey, Utah, 1955

Medium	Total		Yes		No	
	Number	Per cent of total	Number	Per cent of total	Number	Per cent of total
Television	763	100	638	84	125	16
Radio	1124	100	327	29	797	71
Newspaper	1081	100	541	50	540	50

Table 13. The number of programs and/or sponsors recalled by respondents on television and radio--1200 respondents, consumer opinion survey, Utah, 1955

Number of programs and/or sponsors specifically recalled by respondents	Television		Radio	
	Number	Per cent	Number	Per cent
0	39	6	81	25
1	273	43	194	59
2	223	35	41	13
3 and over	103	16	11	3
TOTAL	638	100	327	100

Respondents recalled specific television advertising sponsors more than they recalled the specific programs. The 638 who recalled having seen some dairy advertising on television recalled a total of 736 programs and 984 sponsors (Table 14). The program most recalled was the Cloverleaf Theater and their sponsor, the Cloverleaf Dairy was the sponsor most recalled. Spot announcements or advertisements were the type of "program" recalled by the second largest number of respondents, while the Bob Crosby Show ranked third. None of the remaining 24 programs recalled represented more than nine per cent of the total.

Aside from the Cloverleaf Dairy, the brand name Lucerne (Safeway's milk) was the next most commonly recalled sponsor on television. The American Dairy Association was the sponsor recalled by the third highest total, with Hiland Dairy placing fourth. The remaining 11 sponsors mentioned were recalled by small percentages of the respondents.

Radio program sponsors were also recalled by more respondents than were radio programs (Table 15). Spot announcements or advertisements were the type of "program" most recalled by those who had heard some dairy advertising on radio. The second highest number recalled having heard a "cooking" program but could not recall if it had a specific name. Other programs recalled on this medium were recalled by a small percentage. A total of 17 different programs were recalled by the respondents.

The dairy sponsor most recalled on the radio was the Sego Milk Company. Another evaporated milk company, Morning Milk Company, was recalled by the second highest total. The Cloverleaf Dairy, Hiland Dairy, and the American Dairy Association, all of whom ranked highest among television sponsors recalled, ranked third among radio sponsors recalled. A total of 17 different sponsors were recalled by respondents.

Table 14. Television dairy programs and dairy sponsors observed by respondent—1200 respondents, consumer opinion survey, Utah, 1955

Program	Number	Per cent of total	Sponsor	Number	Per cent of total
Cloverleaf	249	34	Cloverleaf	282	29
Spot Announcement	146	20	Lucerne	155	16
Bob Crosby	97	13	A.D.A.	146	15
Safeway	37	5	Hiland	108	11
Cisco Kid	27	4	Meadow Gold	86	8
Walt Disney	25	3	Cream O'Weber	59	6
George Goebel	16	3	Pet Milk	50	5
Cactus Jim	71	9	Arden	31	3
Burns and Allen	11	2	Sego Milk	24	2
Cooking	9	2	Carnation	16	2
Marshall Dan	8	1	Rocky Mountain	9	1
Margaret Masters	7	1	Dairy Gold	6	1
Amateur Hour	6	1	Morning Milk	5	1
Art Linkletter	4	1	Paramount	4	*
Mary Taylor	4	1	Cache Valley Dairy Assn.	2	*
Club 4	3	*	Bordens	1	*
Liberace	3	*			
Pinky Lee	3	*			
Bob Hope	3	*			
Life of Riley	2	*			
Sports Program	2	*			
Romar of the Jungle	1	*			
Lynn Arnold	1	*			
Late Show	1	*			
TOTAL	736**	100		984	100

* Less than 0.5 per cent

** The first two responses given were recorded

Table 15. Radio dairy programs and sponsors observed by respondents--1200 respondents, consumer opinion survey, Utah, 1955

Program	Number	Per cent of total	Sponsor	Number	Per cent of total
Spot announcement	62	34	Sego Milk	54	24
Cooking	34	19	Morning Milk	32	14
Bob Hope	19	10	Hiland	26	11
Mary Taylor	16	8	A.D.A.	26	11
Betty Crocker	16	8	Cloverleaf	22	9
News	10	5	Cream O'Weber	20	9
Firms of dairies	5	3	Rocky Mountain	14	6
Margaret Masters	5	3	Lucerne	14	6
Arthur Godfrey	5	3	Meadow Gold	12	5
Safeway	3	1	Paradale	3	1
Pet Milk Program	3	1	Local dairy	3	1
Bob Crosby	3	1	Sargent	3	1
Arden Hour	2	1	Paramount	2	1
Cisco Kid	1	1	Ideal	2	1
Bob and Dot Brown	1	1	Winder	1	*
Quiz	1	1	Brown's	1	*
Cloverleaf Club	0	*	Kraft Cheese	1	*
TOTAL	186**	100		236	100

* Less than 0.5 per cent

** The first two responses given were recorded

Those respondents who had observed dairy advertising in the daily newspaper were asked to describe what they recalled having seen. Their descriptions varied, but the largest number recalled having seen some specific dairy firm or brands advertised (Table 16).

The second largest number recalled having seen some specific dairy product advertised. Cottage cheese was the product most commonly mentioned in this group, with fluid milk and other type cheeses ranking next in that order. Ninety-five respondents had seen dairy advertising in the newspaper

Table 16. Respondent observance of dairy advertising in newspaper--1200 respondents, consumer opinion survey, Utah, 1955

Description of advertising			Number	Per cent of total
Specific firms or brands			154	25
Can't recall specifically but have seen some			95	15
Drink milk ad or prominent people drinking milk			87	13
Price war			74	11
Special use of product			26	4
Specials of sales			21	3
Store names			10	2
Cartoon			7	1
Special carton			6	1
Support local industry			2	*
Recipes			19	3
Specific dairy products	Number	Per cent		
Cottage cheese	75	11		
Canned milk	3	1		
Ice cream	4	1		
Milk	20	3		
Chocolate milk	7	1		
Cheeses	16	2		
Half and half	2	*		
Cream	2	*		
Dry milk	4	1		
Butter	8	1		
Buttermilk	3	1		
Total dairy products	144	22	144	100
TOTAL			655**	100

* Less than one per cent

** The first two responses given were recorded

but could not recall it specifically, while 87 recalled specifically having seen the Utah Milk Foundation "drink milk" advertisements on the funny page of daily newspapers throughout the state.

Summary. Radio was the medium owned by most respondents, with those subscribing to a daily newspaper ranking second in number, and those owning television sets third. Respondents listened to the radio most in the morning, with approximately one-half listening regularly at this time of day. Television was viewed mostly at night by virtually all of those who owned it.

The majority of respondents did not use these media as shopping aids in purchasing dairy products or other food products. However, of those who did use these media for this purpose, more used them as shopping aids for purchasing other food products than for purchasing dairy products. The newspaper was the medium used most by respondents for purchasing both types of products. Television was used by the second largest number.

Dairy advertising on television was recalled by more respondents than was advertising done by the dairy industry on the other two media. Dairy advertising on radio was the least recalled. More respondents recalled dairy program sponsors than recalled the program name. The Cloverleaf Theater was the television program recalled most often, while the Cloverleaf Dairy was the sponsor most remembered. Spot announcements or advertisements were the types of radio programs recalled most, while the Sego Milk Company and Morning Milk Company were the sponsors most often named.

The type of newspaper dairy advertising most commonly described was respondent naming of specific firms or brand names. Utah Milk Foundation "Drink Milk Ads" on the funny page of daily newspapers throughout the state

of Utah was the type described by the third highest number.

Respondent preference of advertising media

Introduction. Respondent attitudes toward their preference of advertising media were studied in this section. In addition to the three media mentioned in the preceding section, the media of store advertising was also used for this analysis. Respondents were asked which of the four media appealed to them most in the sense of encouraging them to use dairy products and why that particular medium was most appealing.

Advertising media. Television advertising was preferred by more respondents than were any of the other media (Table 17). Forty per cent of the respondents interviewed indicated a preference for advertising from this medium. Twenty per cent stated a preference for store advertising, 18 per cent felt newspaper advertising was most appealing, and 11 per cent liked radio advertising most. Eleven per cent stated that they disliked advertising of any kind and did not prefer any of the media.

Of the 638 respondents who had immediate access to the three media,[1] 57 per cent preferred television advertising, while only two per cent preferred radio advertising. Sixteen per cent stated a preference for newspaper advertising and 14 per cent preferred store advertising.

Of that group which had access to only radio and the daily newspaper, store advertising was preferred by 30 per cent, while newspaper and radio advertising were preferred by 27 per cent and 26 per cent respectively.

Only 29 per cent of those who had only radio preferred this medium. The number of respondents having only television and only the daily

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1 For purposes of this discussion it will be assumed that all respondents had access to the media of store advertising.

Table 17. The relationship between the advertising media around the respondent and his attitude toward which medium encourages him most to buy dairy products--1200 respondents, consumer opinion survey, Utah, 1955

Respondent has:	Total Number	Total %	Media which encourages purchase of dairy products: Store advertising	% of total	TV advertising	% of total	Newspaper	% of total	Radio	% of total	None of these	% of total
Television only	6	100	1	17	5	83	0	0	0	0	0	0
Television & radio	52	100	6	12	35	67	2	4	1	2	8	15
Television & newspaper	63	100	12	20	37	60	6	7	0	0	8	11
Radio only	51	100	14	27	7	14	5	10	15	29	10	20
Radio & newspaper	373	100	111	30	30	8	99	27	97	26	36	9
Newspaper only	8	100	2	25	1	13	2	25	1	12	2	25
All three	638	100	92	14	361	57	100	16	15	2	70	11
None	4	100	1	25	1	25	0	0	0	0	2	50
TOTAL	1195*	100	239	20	477	40	214	18	129	11	136	11

* one respondent felt all these were equally effective and had all three media

newspaper are too small for accurate analysis or comparison.

Respondents stated three main reasons for preferring television advertising (Table 18). The largest percentage preferred it because they thought the advertising was life-like and interesting to watch. Another group preferred it because they could see how things were actually used, while the third group liked being able to both see and hear the demonstrations at the same time. Other reasons stated represented less than seven per cent of the total.

Table 18. Reasons television advertising is most appealing to respondents--1200 respondents, consumers opinion survey, Utah, 1955

Reasons	Number	Per cent of total
See things in use	111	22
Like the ads	34	7
Exhibits sppealing, attractive, interesting, or life-like	127	25
Use it more or watch it all the time	71	14
See and hear	106	21
Have to watch ads as part of program	28	5
Educational to children	25	5
Children influence	3	1
TOTAL	505	100

2 No reply

Store advertising appealed to respondents mostly because they came in contact with it while they were shopping. Seventy-six per cent of the responses indicated that respondents liked this type of advertising because it was suggestive and aided them while they were shopping (Table 19)

Table 19. Reasons store advertising appeals to respondents--1200 respondents, consumer opinion survey, Utah, 1955

Reasons		Number	Per cent of total
Can see while shopping and suggest things to buy while shopping		183	76
Don't pay attention to others		27	12
Miscellaneous		28	12
Appealing - realistic	5		
Don't know	5		
See bigger variety	3		
Specials	6		
Free samples	4		
Own store	3		
TV, radio, paper not local	2		
TOTAL		238*	100

6 No reply

* First two replies given were recorded

Most respondents preferred newspaper advertising because they read the paper more often and were able to follow the advertising (Table 20). This reason represented 50 per cent of the total responses, while 14 per cent like the newspaper advertising because they could use it to look for shopping specials and compare prices.

Table 20. Reasons newspaper advertising is most appealing to respondent--1200 respondents, consumer opinion survey, Utah, 1955

Reason		Number	Per cent of total
Follow it closer and use it more		110	50
Use ads for shopping specials		32	14
Like to look at ads		27	12
Give more information		15	6
Miscellaneous		42	18
Appealing	3		
They are local ads	6		
Everybody has access to them	4		
Competition of sales	3		
Remember it	7		
Recipes	7		
Convenience	5		
TOTAL		219*	100

7 No reply
* First two replies were recorded

"I have the radio on all the time and listen to this advertising more." This was the reason given by most respondents for preferring radio advertising. The second most common reply was, "I can listen while I work."

Summary. More people preferred advertising through the medium of television than through any of the other media. Store advertising ranked second, newspaper advertising third, and radio advertising fourth.

Of the respondents who preferred television advertising, the largest number preferred it because they thought the advertisements were life-like and interesting to watch. Store advertising appealed most to those who

Table 21. Reasons radio advertising is most appealing to respondent--1200 respondents, consumer opinion survey, Utah, 1955

Reason	Number	Per cent of total
Listen while I work	34	26
Have radio on all the time and hear more	82	64
Miscellaneous Like recipes More people use it Pay more attention to it	13	10
TOTAL	129*	100

2 No reply
* First two responses given were recorded

preferred it because they felt it was suggestive and aided them while shopping. Those who preferred newspaper advertising did so because they read the paper more often and were able to follow the ads. Radio advertising was preferred most because those who liked it best listened to it more than they used the other media.

Respondent attitudes toward effectiveness of advertising methods

Respondent attitudes toward various methods of advertising were ascertained by asking each respondent to rate as excellent, good or poor the list of advertising methods appearing in Table 22. The methods selected for rating by the respondents are some of those used by the dairy industry in their advertising program or some which might be used by the dairy industry to supplement the program.

Store specials was the method rated highest by most respondents. Thirty-six per cent of those interviewed rated this method as excellent,

while an additional 49 per cent considered it as a good method. Cartoon advertising and demonstrations of quality and use at point of sale were also considered as excellent methods by larger numbers of respondents. Twenty per cent of those interviewed considered cartoons as an excellent method of advertising, while 16 per cent considered demonstrations at the point of sale as excellent.

Testimonials by celebrities was one of two methods which were considered as poor by the majority of respondents. Sixty-one per cent felt testimonials were a poor method of advertising dairy products, while 35 per cent believed it was a good method. A considerable number of respondents indicated to the enumerators taking the survey that they felt those making the statement only for monetary gain. This method was rated excellent by the lowest percentage of respondents for any method.

The other method which was considered poor by the majority of respondents was "sending in carton tops and receiving gifts from the company." Fifty-four per cent rated this method poor, while 34 per cent considered it only a good method. Twelve per cent considered it as being excellent.

Before abandoning these two methods as unsatisfactory, one should consider the source of these attitudes and the age groups they are most likely to affect. In most cases, the respondents in this sample were adult heads of households, either male or female. Primarily, these methods do not appear to be designed to appeal to the adult population. They seem more designed to appeal to the children. Since children exert some influence on family food purchases, it would seem preferable to obtain their attitudes toward these methods before they are abandoned.

The opinion of respondents concerning what motivates them to buy was investigated. Respondents were asked if they had ever purchased any dairy

Table 22. Respondent rating of various methods of advertising and promotion—1200 respondents, consumer opinion survey, Utah, 1955

Method	Total	Per cent of total	Excellent		Good		Poor	
			Number	Per cent of total	Number	Per cent of total	Number	Per cent of total
Testimonials by celebrities (1 no answer)	1200	100	55	4	416	35	729	61
Cartoons (3 no answers)	1200	100	235	20	645	54	320	26
Slogans, songs, etc. (1 no answer)	1200	100	95	8	715	60	390	32
Store specials (4 no answers)	1200	100	433	36	589	49	178	15
Sending in carton tops	1200	100	148	12	403	34	649	54
Demonstrations of quality or use	1200	100	187	16	707	59	306	25

products because the makers of the product sponsored some sort of entertainment program they liked (Table 23). Eighty-six per cent indicated this did not influence their purchases. This type motivation is somewhat similar to the two "methods" of advertising just discussed. As with the methods of advertising, children would be more likely to respond favorably to this type question, and although the adult is not personally motivated by the program presented, he may be influenced by a child who likes the program and asks for the product advertised on it.

Table 23. Respondent purchase of dairy products resulting from knowledge of program sponsor--1200 respondents, consumer opinion survey, Utah, 1955

Have you ever purchased dairy products because you liked program	Number	Per cent of total
Yes	168	14
No	998	86
TOTAL	1166	100

34 no reply

products because the makers of the product sponsored some sort of entertainment program they liked (Table 23). Eighty-six per cent indicated this did not influence their purchases. This type motivation is somewhat similar to the two "methods" of advertising just discussed. As with the methods of advertising, children would be more likely to respond favorably to this type question and, although the adult is not personally motivated by the program presented, he may be influenced by a child who likes the

program and asks for the product advertised on it.

Summary. Store specials was the method of advertising rated "excellent" by the most respondents. Cartoon advertising and demonstrations of quality or use at the point of sale were rated "excellent" by the next largest numbers of respondents.

Testimonials by celebrities and sending in carton tops and receiving back gifts from the company were the two methods considered "poor" by most respondents. Testimonials by celebrities was the only method rated as "poor" by more than 50 per cent of the respondents. Store specials was rated "poor" by the least number of respondents.

The majority of respondents stated that they had never purchased any dairy products because the makers of the product sponsored an entertainment program they liked.

Respondent believability of milk claims

During recent years the dairy industry, as part of their advertising program, has made various claims about fluid milk which were designed to stimulate consumer consumption. In general, these claims have been used as slogans and point out the good milk can do the consumer. These claims were compiled and read to the respondents in the same wording as is used by the dairy industry in their advertising program. Respondents were informed first that these were claims made by fluid milk companies and the dairy industry. They were then asked to state whether the statements were "true" or "false."

In general, respondents accepted the milk claims stated in Table 24 as being true. Of the nine claims stated, seven were believed by 61 per cent or more of those interviewed. "Whole fluid milk is not fattening" was repudiated by the largest percentage of respondents and was the only statement

Table 24. Respondent believability of milk claims--1200 respondents, consumer opinion survey, Utah, 1955

Statement	True		False		Don't know	
	Number	Per cent of total	Number	Per cent of total	Number	Per cent of total
"You get a lift from milk"	780	65	135	28	85	7
"Milk helps eyesight"	512	43	460	38	228	19
"Milk is your most practical source of calcium	1139	95	39	3	22	2
"Whole fluid milk is not fattening"	489	41	636	53	75	6
"You never outgrow your need for milk"	1150	96	40	3	10	1
"People from 6 to 60 should drink 3 glasses of milk daily"	963	80	225	19	12	1
"Milk helps relax your nervous system"	795	66	259	22	146	12
"You can lose weight comfortably on a high protein milk diet."	732	61	287	24	181	15
"Milk is one of your lowest priced foods"	933	78	217	17	50	5

for which the "false" responses outnumbered the "true replies. "Milk helps eyesight" also received a low percentage of "true" response, but for this slogan 19 per cent stated they "don't know." The American Dairy Association slogan "You never outgrow your need for milk" and the claim "Milk is your most practical source of calcium" had the highest number of believers. Ninety-six per cent indicated belief in the American Dairy Association slogan, while 95 per cent felt the latter claim was true. There were no respondents who felt all the claims were false.

Respondent attitudes regarding milk prices were investigated with the claim "Milk is one of your lowest priced foods." Seventy-eight per cent thought this statement was true, while 17 per cent said "false" (Table 24). No apparent relationship was found between respondent attitudes toward this claim and family income (Table 25). The percentage of believers and non-believers within each income group varied only slightly.

Table 25. The relationship between family income and respondent attitude toward selected milk claim--1200 respondents, consumer opinion survey, Utah, 1955

Milk is one of your lowest priced foods	Total No.	Total Per-cent	Income: Under $3000	Per-cent of total	$3000 to $5000	Per-cent of total	$5000 to $7500	Per-cent of total	Over $7500	Per-cent of total
True	922	100	176	19	518	56	173	19	55	6
False	216	100	41	19	124	57	36	17	15	7
Don't know	46	100	6	13	30	65	6	13	4	9
TOTAL	1184	100	223	19	672	57	215	18	74	6

Respondent attitudes regarding weight were also investigated. Respondents were confronted with the claims "Whole fluid milk is not fattening," and "You can lose weight comfortably on a high protein-milk diet." Even though the majority of respondents felt that fluid milk was fattening, most still believed they could lose weight on a high protein-milk diet (Table 24). This apparent discrepancy in attitude may be due to a number of assumptions on the part of respondents. First, it may be that the respondent felt that even though milk was fattening, it did not cause you to gain weight when

Table 26. The relationship between respondent daily consumption of fluid milk and respondent attitude toward selected milk claim--1200 respondents, consumer opinion survey, Utah, 1955

Respondent consumption (glasses per day)	Total	Per cent of total	Whole fluid is not fattening: Yes Number	Yes Per cent of total	No Number	No Per cent of total	Don't know Number	Don't know Per cent of total
0	272	100	90	33	167	61	15	6
1	173	100	52	30	101	58	20	12
2	333	100	145	44	162	49	26	7
3	272	100	140	51	122	45	10	4
4 and over	120	100	62	41	84	56	4	3
TOTAL	1200	100	489	41	636	53	75	6

combined with a high protein diet. Secondly, the respondent may have assumed that the claim referred to skimmed milk. Third, the respondent may have become absorbed in the words "high-protein" and failed to receive the full implication of the statement.

Respondent attitudes toward whether fluid milk is fattening may or may not have affected their daily consumption (Table 26). Sixty-one per cent of those who were non-drinkers of fluid milk felt that it was fattening as did 58 per cent of those who drank one glass of milk daily. However, 56 per cent of those who drank four or more glasses of milk daily also felt it was fattening, but presumably did not limit their consumption because of this attitude.

Summary. Only two of the nine milk claims were not believed by the majority of respondents. Less than one-half did not believe "Milk helps

eyesight" and "Whole fluid milk is not fattening." The American Dairy Association slogan "You never outgrow your need for milk" and the claim "Milk is your most practical source of calcium" was believed by the largest number of respondents. There were no respondents who felt all the claims were false.

No relationship was found between respondent income and their belief of the milk claim "Milk is one of your lowest priced foods."

Even though the majority of respondents felt that whole fluid milk was fattening, most believed you can lose weight on a high protein-milk diet. This apparent discrepancy may be due to a number of assumptions by the respondent in answering the question. A higher per cent of the three and four glass milk drinkers believed the claim and a lower per cent of the three to four glass drinkers did not believe the claim.

Respondent attitudes toward the effect of advertising of dairy products on the price of dairy products

To ascertain respondent attitudes toward the effect the increased advertising of dairy products has had on their price, respondents were asked if they thought such advertising had increased, decreased, or had no effect on the price of dairy products. No attempt was made to measure the amount of change the respondent may have thought had taken place.

The majority of respondents (57 per cent) felt that the increase in dairy advertising had not affected the price of dairy products (Table 27). However, 37 per cent believed that the increased dairy advertising had caused the price of dairy products to increase. Four per cent "did not know" while two per cent felt it had caused a decrease in the price of dairy products.

Table 27. Respondents' attitude toward effect of advertising on price of dairy products—1200 respondents, consumer opinion survey, Utah, 1955

Advertising effect on price	Number	Per cent of total
Increased	308	37
Decreased	15	2
No effect	481	57
Don't know	35	4
TOTAL	839	100

11 No reply

Those who believed that increased advertising had caused an increase in the price of dairy products were not confined entirely to non-farm income groups (Table 28). Approximately the same percentage of farm respondents as non-farm respondents felt that dairy product prices had increased as a result of the increase in advertising.

Table 28. Relationship between source of income and respondent attitude toward the effect of increased advertising on price of dairy products—1200 respondents, consumer opinion survey, Utah, 1955

Effect of increased advertising on price	Number	Per cent of total	Source of income: Full time farm (dairy)	Per cent of total	Full time farm (other)	Per cent of total	Non-farm	Per cent of total
Increased	308	37	6	37	13	32	289	37
Decreased	15	2	0	0	0	0	15	2
No effect	481	57	7	44	24	58	450	58
Don't know	35	4	3	19	4	10	28	3
TOTAL	839	100	16	100	41	100	782	100

FLUID MILK

Purpose

The purpose of this section is to provide data regarding the influence of selected family characteristics on fluid milk consumption, to present respondent attitudes toward consumption of fluid milk and factors limiting family consumption of fluid milk, and to analyze respondent attitudes toward the source from which they obtain their fluid milk.

Household consumption of fluid milk

Ninety-nine per cent of the respondents interviewed used fluid milk of one type or another in their households (Table 30). Whole fluid milk, either pasteurized or homogenized, was the most common type of fluid milk used in the household. One hundred fifty-nine families, or 13 per cent of the households used raw fluid milk. Only four per cent of the families used skimmed fluid milk (Table 29).

The average family per capita consumption of fluid milk for families using fluid milk was 4.0 quarts per week (Table 30).

Average per capita consumption of fluid milk tended to increase with increased family income (Table 31). Families with income of less than $3,000 annually consumed 3.7 quarts average while those with incomes over $7,500 annually consumed 4.0 quarts average. Average per capita consumption was slightly higher, however, among families with $3,000-$7,500 annual income.

Per capita consumption of fluid milk tended to decrease with increased family size, especially in families of over three members

Table 29. Total household consumption of fluid milk per week--1200 respondents, consumer opinion survey, Utah, 1955

Amount consumed (quarts)	Pasteurized whole milk		Skimmed fluid milk		Raw fluid milk	
	Number	Per cent of total	Number	Per cent of total	Number	Per cent of total
None	166*	14	1147	96	1041	87
1-6	154	12	37	3	12	1
7-14	392	33	15	1	27	2
15-21	300	25	1	***	38	3
22-28	119	10	0	0	43	4
Over 28	69	6	0	0	39	3
TOTAL	1200**	100	1200	100	1200**	100

* Includes raw milk users
** Includes seven respondents who used both raw and pasteurized milk
*** Less than 0.5 per cent

Table 30. Family per capita consumption of fluid milk--1200 respondents, consumer opinion survey, Utah, 1955

Amount (quarts per week)	Number	Per cent of total	Average
0	14	1	.000
1.0 and under	51	4	.7990
1.5-3.0	386	32	2.3898
3.5-5.0	515	43	4.3145
5.5-7.0	181	15	6.1850
Over 7.0	53	5	8.7264
TOTAL	1200	100	4.0*

* Computed for users only

(Table 32). Families with only one or two members consume only slightly less per capita amounts than do families of three to six members. Families with over six members consumed considerably smaller per capita amounts. This may be due to the tendency of respondents to consume less as their age increases and the large number of the one to two member families which are composed entirely of adults.

Farm families consumed considerably higher per capita amounts of fluid milk than did non-farm families (Table 33). Farm family per capita consumption exceeded non-farm family per capita consumption by 1.0 quarts per week as they consumed 4.9 quarts per capita per week compared to 3.9 quarts for non-farm families. Farm family per capita consumption was also considerably above the total sample per capita average of 4.0

Table 31. Relationship of income to per capita consumption of fluid milk--1200 respondents, consumer opinion survey, Utah, 1955

Per capita consumption of fluid milk per week (quarts)	Total		Income							
	Number	Per cent of total	Under $3000	Per cent of total	$3000 to $5000	Per cent of total	$5000 to $7500	Per cent of total	Over $7500	Per cent of total
1 and less	50	4	18	8	22	3	6	3	4	5
1-3	381	32	87	40	209	31	60	28	25	34
3-5	510	44	72	33	303	45	105	49	30	41
5-7	176	15	32	15	97	15	35	17	12	16
Over 7	53	5	8	4	35	6	7	3	3	4
TOTAL	1170	100	217	100	666	100	213	100	74	100
AVERAGE CONSUMPTION	4.0		3.7		4.1		4.1		4.0	

Table 32. Relationship of family size to per capita consumption of fluid milk--1200 respondents, consumer opinion survey, Utah, 1955

Per capita consumption of fluid milk per week (quarts)	Total		Family size							
	Number	Per cent of total	1-2	Per cent of total	3-4	Per cent of total	5-6	Per cent of total	Over 6	Per cent of total
1 and less	51	4	15	7	17	3	10	3	9	10
1-3	386	33	85	36	153	29	114	34	34	38
3-5	515	43	82	35	262	49	134	40	37	42
5-7	181	15	38	16	73	14	65	20	5	6
Over 7	53	5	14	6	26	5	9	3	4	4
TOTAL	1186	100	234	100	531	100	332	100	89	100
AVERAGE	4.0		4.0		4.1		4.0		3.5	

Table 33. Relationship of source of income to per capita consumption of fluid milk--1200 respondents, consumer opinion survey, Utah, 1955

Per capita consumption of fluid milk (qts. per week)	Total		Source of income			
			Farm		Non-farm	
	Number	Per cent	Number	Per cent of total	Number	Per cent of total
1 and less	51	4	5	4	46	4
1-3	386	33	24	20	362	34
3-5	515	43	39	32	476	45
5-7	180	15	41	34	139	13
Over 7	53	5	12	10	40	4
TOTAL	1185	100	121	100	1063	100
AVERAGE	4.0		4.9		3.9	

1 No reply

quarts per week (Table 30). This wide differential between farm family and non-farm family consumption may have been due, in part, to the small number of farm respondents interviewed, since such a small number may not be representative of the condition as it actually exists.

Summary

Ninety-nine per cent of those interviewed used fluid milk in their households. Eighty-six per cent of the households used whole fluid milk, either pasteurized or homogenized, and 13 per cent used raw fluid milk. Four per cent of the families supplemented their whole or raw fluid milk with skimmed milk. Average per capita consumption was 4.0 quarts per week.

Average per capita consumption of fluid milk tended to increase with family income as consumption was highest among those families with family incomes of $3000 to $7500. In families of three or more members, per capita consumption of fluid milk decreased with increased family size. Families with over six members consumed the smallest per capita amounts. Farm families consumed considerably larger per capita amounts of fluid milk than did non-farm families.

The trend in household consumption of fluid milk and other beverages

To ascertain the trend in household consumption of fluid milk and other beverages, respondents were asked to compare their present household consumption of these beverages with an approximation of their household consumption one year ago.

According to respondent opinions, fluid milk consumption has increased in more households during the past year than have coffee or breakfast juices (Table 34). One-third of the total households contacted stated they had increased their consumption of fluid milk during the past year. Breakfast juices were also consumed in larger amounts during the period and 27 per cent of the households indicated that they were using more of this beverage. Only five per cent of the households had increased their coffee consumption. The majority of respondents, however, felt that their household consumption of these three beverages had remained about the same.

Consumption decreases were also highest among milk as nine per cent of the household indicated their consumption had decreased during the past year. Five per cent of those households using coffee indicated they were using less, while four per cent felt they were using less breakfast juices.

Table 34. Household consumption trend of fluid milk and other beverages--1200 respondents, consumer opinion survey, Utah, 1955

Beverage	Total		Increased		Decreased		About same		Don't use	
	Number	Per cent	Number	Per cent of total	Number	Per cent of total	Number	Per cent of total	Number	Per cent of total
Milk	1200	100	392	33	110	9	684	57	14	1
Coffee	1200	100	60	5	64	5	736	62	340	28
Breakfast juices	1200	100	329	27	44	4	821	68	6	1

Coffee had the most non-using households with 28 per cent while milk and breakfast juice non-users totalled one per cent each of the total sample.

Consumption increases of all beverages was most predominant in families which had annual incomes of $3000 to $5000 (Table 35). More families in the low income group (under $3000) increased their consumption of all beverages than did families in the highest income group (over $7500). Approximately the same percentage of farm families increased their consumption of fluid milk as did non-farm families.

Table 35. Relationship of income to consumption trend of milk, juice and coffee--1200 respondents, consumer opinion survey, Utah, 1955

	Increased consumption							
	Total		Milk		Juices		Coffee	
Income	Number	Per cent	Number	Per cent of total	Number	Per cent of total	Number	Per cent of total
Under $3000	117	15	51	13	54	17	12	20
$3000-$5000	449	58	246	63	177	54	26	44
$5000-$7500	168	21	74	19	77	24	17	28
Over $7500	45	6	21	5	19	5	5	8
TOTAL	779	100	392	100	327	100	60	100

2 No reply to income

The main reason given for increasing their consumption of fluid milk was that the size of the family had increased (Table 36). Forty-eight per cent of the respondents felt that this condition had caused their increase in fluid milk consumption. Thirty-four per cent felt that they were using more because their children were older and were drinking

Table 36. Reasons for changes in household consumption of fluid milk--1200 respondents, consumer opinion survey of marketing dairy products, Utah, 1955

Reasons	Increased consumption		Decreased consumption	
	Number	Per cent of total	Number	Per cent of total
Children older and use more	131	34		
Increase in size of family	183	48		
Children like it better	28	7		
Used to own cow or bought our own cow	10	3		
Use milk instead of other products	13	3		
Miscellaneous	21	5		
Decrease in size of family			53	48
Family don't drink as much milk			22	20
Medical reasons			16	15
Miscellaneous				
Children older				
Children like better				
Increase in family size				
Used to own cow				
Price too high				
Use powdered milk				
Use other beverages instead				
Miscellaneous total			19	17
TOTAL	386*	100	110	100

6 No reply

more. These reasons were also the ones given by the majority of farm families who had increased their consumption of fluid milk. No respondent indicated directly that advertising had motivated them to increase their consumption.

A change in family size was also the main reason given for decreasing family consumption of fluid milk. Forty-eight per cent of those who had decreased with consumption of fluid milk did so because of a decrease in their family size. Twenty per cent did not know exactly why their family consumption had decreased except that their family didn't drink as much as they had in the past. Fifteen per cent were using less because of medical reasons. The remaining reasons represented a smaller percentage of the total.

Summary. According to respondent opinion, fluid milk consumption has increased in more households during the past year than have coffee or breakfast juices. Consumption decreases were also highest among milk. Twenty-eight per cent of those interviewed did not use coffee, while milk and breakfast juice non-users totalled one per cent each.

An increase in the size of the family was the main reason given for increasing fluid milk consumption during the past year. A large number had also increased their consumption because their children were older and drank more. The main reason given for decreasing fluid milk consumption was a decrease in the size of the family. These were also the main reasons given by farm families for having increased or decreased their consumption.

Consumption increases were most predominant in families with medium incomes. Approximately the same percentage of farm families increased their consumption of fluid milk as did non-farm families.

Factors limiting household consumption of fluid milk

Approximately three-fourths of the respondents interviewed felt they used all the fluid milk their family required and there was nothing which limited its use in their household (Table 37). The presence of this attitude among such a large number of respondents reaffirms the difficult merchandising problem facing the dairy industry today. Getting people to use more of any product is a difficult task, but the task is made much more difficult when the potential customer is convinced that his family has all it needs or wants of the product. Such is the case in attempting to increase fluid milk consumption. Under such circumstances, customers do not react favorably to any inference that their family does not have enough fluid milk. This negative attitude toward suggestion, together with the respondent's firm conviction that his family is fully supplied with fluid milk, presents a very difficult obstacle to increasing milk consumption. The removal of this obstacle is one major problem facing the dairy industry today. Its solution could aid materially in bringing about a satisfactory solution to the dairy problem, since a large number of people apparently maintain this attitude.

Of those who were limited by some factor, 13 per cent stated that the price of milk was too high and thus limited the amount they could buy. Of this total, 82 per cent had family income of less than $5000, with 20 per cent realizing less than $3000 family income annually.

Seven per cent of the families were limited because some part of the family disliked the taste of milk, while three per cent consumed less than they would like to because of medical reasons. Only two per cent indicated they limited their use of milk because it was fattening.

Table 37. Factors limiting household consumption of fluid milk--1200 respondents, consumer opinion survey, Utah, 1955

Limiting factors	Number	Per cent of total
Don't like taste	79	7
Nothing	876	73
Price too high	161	13
Fattening	24	2
Medical reasons	40	3
Miscellaneous Not home very much Pasteurization Loses food value Use other beverages We're too old Just don't use it		
Miscellaneous Total	18	2
TOTAL	1198	100

15 No answer

Only nine per cent of the respondents from farm families indicated their consumption of fluid milk was limited (Table 38). Of the 11 respondents in their category, only one was limited by what he considered high cost of milk. The remaining families were limited by such factors as taste, medical reasons and their belief that milk was too fattening. Some limitation may be necessary when considering the results of this analysis because of the small number of farm families in the total sample.

Table 38. Factors limiting farm consumption of fluid milk--1200 respondents, consumer opinion survey, Utah, 1955

Reason	Total	Source of income	
		Farm (dairy)	Farm (other)
Nothing	113	23	90
Don't like taste	3	2	1
Medical reasons	4	1	1
Too fattening	2	1	1
Price too high	1	0	1
Use other beverages	1	0	1
TOTAL	124	27	97

2 No reply

Summary. Approximately three-fourths of the respondents felt there was nothing which limited their use of fluid milk. Of those who were limited by some factor, the largest number were limited by the price of milk being too high. The second highest number were limited because some part of the family disliked the taste of milk. Only nine per cent of the farm families indicated they were limited in their use of fluid milk. Dislike for the taste of milk and medical reasons were the two factors which limited the most farm families.

Respondent consumption of fluid milk and attitudes toward consumption of milk by various age groups

Twenty-three per cent of the respondents interviewed were non-drinkers of fluid milk. The majority of respondents consumed two to three glasses of milk daily, with 23 per cent consuming three glasses daily as recommended by the American Dairy Association. Twelve per cent consumed four or more glasses of milk per day. Milk drinkers consumed an average of 2.5 glasses per day, while the average daily consumption for the entire sample, including non-drinkers, was 2.0 glasses.

Table 39. Respondent daily consumption of fluid milk in glasses--1200 respondents, consumer opinion survey, Utah, 1955

Amount (glasses)	Number	Per cent of total
0	272	23
1	173	14
2	333	28
3	272	23
4	125	10
5	10	1
6	12	1
Over 6	3	*
Total	1200	100
Average**	2.5	

* Less than 1 per cent
** Computed for users only

Those who were non-drinkers of milk believed, in general, that adults should drink milk (Table 39a). Only eight per cent of the non-drinkers felt that adults did not need to drink milk. Sixty-eight per cent thought adults should drink two to three glasses per day, while 16 felt they should drink as much as four glasses per day.

Table 39a. Respondents who consumed no fluid and opinions of how much fluid milk adults need--1200 respondents, consumer opinion survey, Utah, 1955

No. of glasses per day	Number	Per cent
0	22	8
1	21	8
2	113	42
3	71	26
4	45	16
TOTAL	272	100

Dislike for the taste was the main reason given by non-drinkers for not drinking fluid milk (Table 40). Fifty-six per cent refrained from drinking milk for this reason, while 19 per cent abstained because of medical reasons. Twelve per cent did not drink milk because it was fattening, and only two per cent did not drink it because it was too expensive. Nine per cent refrained from drinking milk because they felt adults did not need it.

Table 40. Reasons non-drinkers do not drink fluid milk--1200 respondents, consumer opinion survey, Utah, 1955

Reasons	Number	Per cent
Don't like taste of it	142	56
Medical reasons	47	19
Calories and weight	30	12
Adults don't need it	22	9
Price too high	5	2
Other	5	2
TOTAL	253*	100

* 21 respondents answered "drink coffee instead" but did not indicate why they preferred it to milk.

8 No reply

There was an apparent relationship between respondent age and respondent daily consumption of fluid milk (Table 41). Consumption tended to decline with increased age. Average daily consumption for milk drinkers declined from an average of 2.7 glasses per day for those from 16 to 20 years of age to 2.3 glasses per day for those ages 50 years and over. Average daily consumption, including non-drinkers, was 2.2 glasses and 1.6 glasses for these respective age groups.

Table 41. Relationship of age to respondents' daily consumption of fluid milk--1200 respondents, consumer opinion survey, Utah, 1955

Responded consumption daily (glasses per day)	Total		Age									
	Number	Per-cent	16 to 20	Per cent of total	21 to 30	Per cent of total	31 to 40	Per cent of total	41 to 50	Per cent of total	Over 50	Per cent of total
0	263	22	6	19	45	14	88	23	59	26	65	31
1	170	14	3	10	45	14	49	13	32	14	41	20
2	325	28	8	26	98	30	105	27	64	28	50	24
3	270	23	9	29	88	27	95	25	44	20	34	16
4 and over	147	13	5	16	52	15	46	12	26	12	18	9
TOTAL	1175	100	31	100	32.8	100	383	100	22.5	100	208	100
AVERAGE CONSUMPTION*	2.5		2.7		2.6		2.5		2.4		2.3	
AVERAGE CONSUMPTION**	2.0		2.2		2.2		1.9		1.8		1.6	

25 No reply to age
* Computed for users only
** Computed for total sample

There was no apparent relationship between respondent daily consumption and family income (Table 42). Average daily consumption for the group which included milk drinkers only varied only slightly with changes in family income. That group which included non-drinkers of milk, showed a tendency for consumption to increase with income as those with under $3000 annual income consumed an average of 1.4 glasses per day while those with over $7500 annual income consumed an average of 1.8 glasses per day. This tendency was not consistent throughout all income groups, however. The groups of respondents which excluded non-drinkers of milk consumed from 0.5 to 1.0 glasses per day average more than did the group which included the non-drinkers.

Males consumed only slightly more milk per day than did females. The percentage of each sex who were non-drinkers was the same.

Respondents, in general, believed that children under 12 years of age and those in the teen-age years should drink about the same amounts of milk each day (Table 43). Fifty-six per cent of the respondents felt that children under 12 years of age should drink four glasses of milk per day, while 51 per cent felt that children in the teen-age years should consume four glasses per day. Approximately one-third of the respondents felt that all age groups should consume the three glasses of milk daily as recommended by the American Dairy Association. Only six per cent of the respondents believed that children under 12 should drink two glasses or less each day, while seven per cent thought children in the teen-age years should drink this amount. Forty-eight per cent, however, thought adults needed only two or less glasses per day. Only two per cent of the respondents felt that children below the age of 18 did not need to drink milk.

Table 42. Relationship of income to respondent consumption of fluid milk--1200 respondents, consumer opinion survey, Utah, 1955

Glasses respondent drinks daily	Total		Income							
	Number	Per cent	Under $3000	Per cent of total	$3000 to $5000	Per cent of total	$5000 to $7500	Per cent of total	$5000 to $7500	Per cent of total
0	267	23	66	30	137	21	47	22	17	23
1	171	14	42	14	100	15	24	11	15	20
2	330	28	62	28	189	28	62	29	17	23
3	269	23	40	18	157	23	57	27	15	20
4 and over	147	12	23	10	89	13	25	11	10	14
TOTAL	1184	100	22.3	100	672	100	215	100	74	100
AVERAGE CONSUMPTION**	2.5		2.4		2.3		2.5		2.4	
AVERAGE CONSUMPTION*	2.0		1.4		1.8		2.0		1.8	

16 No reply to income
* Computed for total sample
** Computed for users only

Table 43. Relationship of respondent consumption to attitudes toward fluid milk consumption of various age groups--1200 respondents, consumer opinion report, Utah, 1955

Amount (glasses)	Age group under 12		Age group 12-18		Age group over 18	
	Number	Per cent of total	Number	Per cent of total	Number	Per cent of total
0	7	1	7	1	25	2
1	7	1	5	*	71	6
2	58	4	67	6	475	40
3	359	30	399	33	419	35
4	672	56	607	51	202	17
5	36	3	66	5	4	*
6	53	4	41	3	4	*
Over 6	8	1	8	1	0	*
TOTAL	1200	100	1200	100	1200	100

* Less than 0.5 per cent

Summary. Twenty-three per cent of those interviewed were non-drinkers of fluid milk. The majority of respondents consumed two to three glasses daily. Average daily consumption for milk drinkers was 2.5 glasses per day, while the average for the entire sample (including non-drinkers) was 2.0 glasses.

Only eight per cent of the non-drinkers felt that adults did not need to drink milk. Dislike for the taste of milk was the main reason given by non-drinkers for not drinking milk.

Respondent daily consumption of fluid milk showed a continual decline with increasing age of the respondent. There was no apparent relationship

between respondent consumption and family income. Males consumed only slightly more milk per day than did females.

Respondents, in general, felt that children under 12 years of age and those in the teen-age years should drink about the same amount of milk each day, with requirements declining for ages over 18 years. Only two per cent of the respondents believed that children below the age of 18 did not need to drink milk. Approximately one-third of the respondents felt that all age groups should consume the three glasses daily as recommended by the American Dairy Association.

Respondent definition of Grade A milk

To ascertain respondent opinions regarding Grade A milk, each respondent was asked how Grade A milk differs from other milk (Table 44). Replies were recorded in the exact words of the respondent and coded in the categories found in Table 45. In many instances, respondent replies included more than one of the statements listed.

Replies were both specific and general in nature. The reply most received was that Grade A milk was "the best milk." This reply represented approximately one-fourth of the total responses. Seventeen per cent of the total replies indicated that Grade A milk was either pasteurized or homogenized, while 14 per cent said it was just "clean milk."

Approximately 10 per cent of the total replies given indicated some knowledge of grade milk as it is usually defined.[1] Six per cent of the total responses indicated that Grade A milk was produced under the highest sanitary conditions. Three per cent felt Grade A milk was milk which met the required standard of having a low bacteria count, while slightly less

[1] Grade A milk may be defined as that milk which is produced under strict sanitary regulations. Conditions and facilities used to produce this milk are under health department control. This milk must meet certain minimum sanitary and quality standards.

than one per cent believed it was milk produced in sanitary barns with sanitary equipment.

Of the somewhat eccentric responses received, one respondent thought Grade A milk with water added, six said it was "next to best" or "good as any," while two respondents felt it was milk without cream.

Table 44. Respondent definition of Grade A fluid milk--1200 respondents, consumer opinion survey, Utah, 1955

Definition	Number	Per cent of total
The best milk	355	25
Pasteurized or homogenized	245	17
Clean milk	196	14
Richest milk	144	10
Passes dairy inspection	110	8
Highest sanitary standards	81	6
Quality--good top	60	4
Bacteria count low	45	3
Taste and flavor best	26	2
Vitamin enriched	25	2
Comes from good dairy or cows	19	1
Good milk	19	1
Freshest milk	14	1
Equipment and barn clean	9	**
Safe for children	5	**
Good as any	4	**
Cold milk	3	**
Milk without cream	2	**
Next to best	2	**
Stays fresh longer	2	**
Water added	1	**
Jersey milk	1	**
In Carton	1	**
Have a monopoly on market	1	**
Don't know	85	6
TOTAL	1455	100

** Less than 0.5 per cent

Source of milk

Most respondents obtained the majority of their fluid milk either from buying it at the grocery store or by having it delivered. Forty-five per cent of the respondents utilize home delivery while 40 per cent purchased their fluid milk from the store. Of the remaining, ten per cent owned their own cow while five per cent bought it from friends or neighbors who owned cows (Table 45).

Table 45. Major source of fluid milk--1200 respondents, consumer opinion survey, Utah, 1955

Source	Number	Per cent of total
Buy at grocery store	484	40
Delivered by milkman	536	45
Own cow	113	10
Neighbors who own cow	62	5
TOTAL	1195	100

5 No reply

The percentage of respondents who owned their own cow or who purchased their milk from a neighbor who owned a cow was highest among those who lived in smaller towns or rural areas, while the percentage of those who purchased their milk from the store or utilized home delivery was highest among those who lived in larger towns or urban areas. Forty-six per cent of those who lived in towns of 1,000 population or less owned their own cow, while only one per cent of those who

lived in towns of 10,000 or more population owned their own cow. However, of those who lived in the latter size towns, 53 per cent had their milk delivered and 44 per cent purchased it at the store. The percentage of respondents who obtained their milk from the store or by delivery decreased with a decrease in town population. Thirty-four per cent of those who lived in towns of 1,000 or less population purchased their milk from the store, while only 11 per cent utilized home delivery (Table 46).

An analysis of family size indicates that families of smaller sizes tend to buy their milk at the store while those of larger size, especially from three to six members, tend to utilize home delivery service (Table 47). The percentage of families who purchase their milk from neighbors and who own their own cow also tends to increase with an increase in family size.

Family income analysis indicates a relationship between the family source of milk and family income (Table 48). The percentage of families who purchase their milk at the store tends to decrease as the size of family income increases, while the percentage of families who utilize home delivery service tend to increase with family income. The majority of raw milk users are included in family income groups of under $5000 per year.

Respondents listed three main reasons for purchasing milk from their present dairy (Table 49). The highest percentage, 28 per cent, felt that their dairy produced good products and for that reason they continued to patronize them. Twenty-four per cent bought from their present dairy because it was "convenient" and could see no reason to change. Twenty-two per cent considered the good type service rendered by their dairy as the reason they purchased from them.

Table 46. Source of milk according to size of community--1200 respondents, consumer opinion survey, Utah, 1955

Town population	Total		Source of milk							
			Store		Delivered		Own cow		Neighbors	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
10,000 over	604	100	266	44	319	53	8	1	11	2
3,000-10,000	260	100	104	40	133	51	8	3	15	6
1,000-3,000	180	100	62	34	68	38	27	15	23	9
Under 1,000	151	100	52	34	16	11	70	46	13	9
TOTAL	1195	100	484	41	536	45	113	9	62	5

5 No reply

Table 47. Relationship of family size to household source of fluid milk--1200 respondents, consumer opinion survey, Utah, 1955

Source of milk	Total		Family size							
	Number	Per cent	1-2	Per cent of total	3-4	Per cent of total	5-6	Per cent of total	Over 6	Per cent of total
Buy at store	484	41	149	62	207	39	102	30	26	30
Delivered	536	45	70	29	263	49	165	50	38	43
Own cow	113	9	14	6	39	7	43	13	17	19
Buy from neighbors	62	5	7	3	26	5	22	7	7	8
TOTAL	1195	100	240	100	535	100	332	100	88	100

16 No reply to income
5 No reply to question

Table 48. Relationship of income to family source of fluid milk--1200 respondents, consumer opinion survey, Utah, 1955

	Total		Income							
Sources of milk	Number	Per cent	Under $3000	Per cent of total	$3000 to $5000	Per cent of total	$5000 to $7500	Per cent of total	Over $7500	Per cent of total
Store	476	41	122	56	258	39	68	32	28	38
Delivered	529	45	58	26	307	46	123	57	41	56
Own cow	112	9	23	10	70	10	15	7	4	5
Neighbors	62	5	18	8	34	5	9	4	1	1
TOTAL	1179	100	221	100	669	100	215	100	74	100

16 No reply to income
5 No reply to question

Table 49. Reasons for purchasing milk from present dairy--1200 respondents, consumer opinion survey, Utah, 1955

Reasons	Number	Per cent of total
Good service	157	22
Good products	199	28
Convenient	177	24
Habit	79	11
Friends or family in the dairy business	45	6
Miscellaneous	67	9
TOTAL	724*	100

* First two responses were recorded

Those who purchased their milk from the grocer store listed two main reasons for this action (Table 50). Thirty-five per cent of the respondents said it was convenient and just as handy to buy their milk at the store while purchasing their other food products. Twenty-six per cent felt that their needs were too irregular for delivery service and bought milk at the store because they could buy it as they needed it. Nine per cent liked the lower price of store milk, while a like percentage bought at the store because they disliked the extra food bill which resulted from home delivery.

Table 50. Reasons for store purchase of fluid milk instead of having home delivery--1200 respondents, consumer opinion survey, Utah, 1955

Reasons	Number	Per cent of total
Just as convenient and handy	157	35
Can buy as needed	115	26
Store milk is cheaper	42	9
Don't like extra bill associated with delivery	40	9
Family connected with store	29	7
No delivery service	23	5
Milk froze in winter	9	2
Miscellaneous Like store milk better Not permanently settled Container preference Have credit at store Pasteurized or homogenized Prefer brand not delivered	31	7
TOTAL	446*	100

* First two replies were recorded

Respondents who bought their milk from neighbors who owned cows did so primarily because the price was cheaper (Table 51). Forty-two per cent of the responses stated this reason. Thirty-five per cent liked the raw milk from their neighbor's cow because they felt it had characteristics which were lacking in store milk. Some preferred the taste of raw milk, others liked the cream they got, while others felt raw milk was richer and contained more food value than the store milk.

Table 51. Reasons for purchasing milk from neighbors who own cow--1200 respondents, consumer opinion survey, Utah, 1955

Reasons	Number	Per cent of total
Has some characteristic processed milk lacks Believe raw milk has more food value Like taste better Like cream I get It is richer	36	42
Price is cheaper	30	35
Most convenient way	20	23
TOTAL	86*	100

* First two replies were recorded

Respondents purchased their present brand of milk primarily because there was some characteristic about the milk itself which appealed to them (Table 52). One-third of the responses given stated that the reason for purchasing the brand of milk they did was because it was fresher, richer, tasted better, or was of the best quality. An additional 18 per cent said they "liked the brand," but indicated no special characteristic which appealed to them.

Summary. Most respondents obtained the majority of their fluid milk either from buying it from the store or having it delivered. A smaller number owned their own cow or bought from a neighbor who had a cow.

The main reason listed by respondents for purchasing from their present dairy was that their dairy produced good products. Those who purchased from the store instead of having it delivered did so because they felt it was just as convenient and handy to buy their milk while

Table 52. Reasons for purchasing particular brand of fluid milk--1200 respondents, consumer opinion survey, Utah, 1955

Reasons	Number	Per cent of total
No brand preference	127	27
Like brand (No particular reason)	82	18
Habit	33	7
Cheaper	15	3
Fresher, richer, like taste of flavor, container preference, best quality	154	33
Only brand sold in store or local product	35	8
Owns or works in store	19	4
TOTAL	465*	100

* First two replies were recorded

purchasing their other food products. The second highest number purchased from the store because they felt their needs were too irregular for home delivery.

Respondents who purchased a particular brand of milk did so primarily because they felt the milk was either fresher, richer, tasted better, or was of the best quality. Most of those who obtained their milk from a neighbor who had a cow did so because the price was cheaper. The second highest number preferred their neighbor's raw milk because they felt it had characteristics which were lacking in store milk.

Small size families tend to buy their milk at the store, while those of larger size families tend to utilize home delivery. The percentage of families who purchase their milk at the store tends to decrease as the

size of family income increases, while the percentage of families who utilize home delivery tend to increase with family income.

The larger percentage of those who owned their own cow or who purchased milk from neighbors who owned a cow lived in small towns or rural areas, while the larger percentage of those who utilized home delivery or who purchased milk at the store lived in larger towns or urban areas.

SUMMARY AND CONCLUSIONS

1. Fifty-two per cent of the respondents felt that advertising other dairy products encouraged their use, while only 30 per cent believed advertising fluid milk encouraged its use in their household.

2. Television was the medium owned by the least number of respondents. However, dairy advertising on television was recalled more often by respondents than was dairy advertising on the radio or in the newspaper.

3. The majority of respondents said they do not use radio, television, or the daily newspaper as a shopping aid in purchasing either dairy products or other food products. However, of those who do use these media more used them as shopping aids for purchasing other food products than for purchasing dairy products. The daily newspaper was the medium most commonly used as a shopping aid.

4. Respondents preferred television advertising to that done through the other advertising media.

5. Store specials was the method of advertising rated "excellent" by the largest number of respondents. Cartoon advertising and demonstrations of quality or use at the point of sales were given this same high rating by the second largest numbers. Testimonials by celebrities was the method respondents disliked most.

6. The feeling of gratitude toward program sponsors for providing entertainment for the respondent did not motivate the respondent to purchase the program sponsors product.

7. Respondents, generally, accepted the advertising claims of the dairy industry about milk as being true. Only the claims "Milk helps

eyesight" and "Whole fluid milk is not fattening" were not believed by the majority of respondents.

8. The majority of respondents (57 per cent) felt the increase in dairy advertising had not affected the price of dairy products.

9. According to respondent opinion, fluid milk consumption had increased in more households during the past year than had consumption of coffee or breakfast juices. Respondents indicated that increases in family size had been the factor most responsible for this increase in milk consumption.

11. Twenty-three per cent of those interviewed were non-drinkers of milk. Only eight per cent of these, however, felt that adults did not need to drink fluid milk.

12. Respondents, generally, felt that children under 12 years of age and those in the teen-age years should consume the same amounts of milk. The majority believed these groups should have four glasses of milk per day. Most respondents felt adult needs were two to three glasses daily.

13. In general, respondent definitions of Grade A milk revealed that respondents did not think of Grade A milk in terms of the generally accepted industry definition. Instead, their definitions were general and included very little specific reference to any parts of this definition.

14. A slightly higher percentage of respondents have their milk delivered than buy it at the store. Forty-five per cent of those interviewed utilized home delivery while 41 per cent purchased their milk from the store. Nine per cent of the respondents owned their own cow and five per cent purchased their milk from neighbors who owned their own cow.

RECOMMENDATIONS

1. That in analyzing the findings of this study the reader be mindful of the limitations of the data. Many of the questions asked in this study were subjective in nature and may not have measured what the respondent would actually do in a given situation. Since respondent stated opinion and conduct may not always be correlated, limitation and careful judgment should be exercised when interpreting the results of this study.
2. That the dairy industry utilize television for advertising their products wherever this medium is available. This medium was owned by the least number of respondents but if respondent preference and program-sponsor recall can be used to gauge media effectiveness, television would appear to be the most effective of the media studied. Television advertising was the type preferred by most respondents. It was also the medium from which respondents recalled having seen dairy advertising most often. This medium also makes possible the utilization of cartoon advertising, demonstrations, and presents the qualities of sight and sound, all of which were favorably rated by those interviewed. This recommendation is made, however, on the basis of this study only and it is recognized that acceptance of such a recommendation by the dairy industry would be contingent on their receiving the best dollar return from this medium. The relative dollar cost and returns of the various media cannot be concluded from this study.

The use of local store advertising is also recommended. It is felt store advertising should be used even in areas where television

is available, since it could supplement television advertising and exercise and "impulse" type influence on consumers. It is believed also that this medium would be the most effective type in rural areas where other advertising media are not as localized and perhaps not as applicable.

3. That the dairy industry make considerable use of cartoon advertising as a method in their television advertising. The use of store demonstrations to exhibit quality and use of dairy products is also recommended. Results of this survey indicate these methods are the most acceptable to the consuming public. The continued use of testimonials by celebrities is also recommended, but it is believed that this method of advertising should definitely utilize people well known to children and the presentation should be directed to these younger people. The lack of acceptance of this method by those interviewed in this study should not necessarily discourage its use.
4. That the dairy industry investigate and study the use of store specials as a means of promoting the sale of dairy products. Those interviewed in this study indicated a favorable acceptance of this method of promotion. The analysis of newspaper ads presented in this study show that dairy products are mentioned infrequently in comparison with other food items and are not being promoted as "sale" products through this medium. It is believed that a similar situation would be revealed in a study of other advertising media.

The applicability of these results to the dairy problem can only be supposed on the basis of this study, but it is believed that these results indicate an area in which further study may prove beneficial to the dairy industry. It is also recommended that in studying this

method of promotion the use of newspaper advertising be considered as a possible advertising medium for carrying out this program.

5. That the dairy industry not wage an extensive merchandising program to "sell" consumers on the value of Grade A milk in an attempt to reduce the number of families using raw milk. In general, consumers now associate Grade A milk with milk that is superior in one characteristic or another. Since this attitude is already present, such a program would seem unnecessary. As for the possibility of converting some raw milk users to use of Grade A processed milk, it is believed that the sales potential is lacking. Most of those who consume raw milk own their own cow or are associated with farming in some capacity so as to have this type milk readily accessable. The majority of these are also located in rural areas. The number of those who consume raw milk and are not associated with farming or live in rural areas is small; thus it presents a somewhat limited market area.

The attitude of those consuming raw milk would also be a deterent in attempting to convert these people to Grade A milk. Most use raw milk because it is cheaper. This is especially true among those who own their own cow. It would seem illogical to expect any significant number of these people to revert to processed milk when they have their own milk available at a lower price, especially when they consider this milk to be as safe as processed milk. There are also some among these raw milk users who feel raw milk has certain superior characteristics; i.e., more food value, better taste, etc., and prefer it for this reason. In most cases these people feel very strong in their dislike for processed milk and to change this attitude would be a very difficult task. With these deterents confronting the industry and the

marketing area being limited in scope, it is felt that the problem is not one to warrant large expenditures for advertising.

7. That the dairy industry, as a collective unit and as individual companies, initiate a progressive program designed to give the consuming public new uses for their present dairy products and to develop new products for sale. The dairy industry is confronted with a very difficult problem; namely, the "satisfied" attitude of the consuming public. Most people who use fluid milk feel they are using all they need or want and there is nothing which limits their use of this product. A common attitude is: "We buy all the milk we can use and our children drink it all the time. If everybody used as much milk as we do there wouldn't be any milk surplus." Along with this attitude the dairy industry is also confronted with consumers who, in general, believe in the value of milk and accept the dairy industry claims about this product as being true. The combination of these two consumer attitudes make promotion of dairy products a very difficult undertaking since the industry is dealing with people who do not feel a need to increase their use of their product and who are not likely affected by their advertising as they already accept their claims as being correct.

The dairy industry has been somewhat successful in their program to point the need for three glasses per day and the continuation of this appeal to use quantities which meet dietary requirements is recommended. However, it is felt that a fundamental objective of the merchandising program of the dairy industry should be to counter this "satisfied" attitude of the consuming public. If the people are actually using all the dairy products they need, there is no real need for a merchandising program. Certainly no one in the dairy industry would

accept such a condition as being representative of the consuming public. Therefore the dairy industry must create new products and new uses which will show these "satisfied" customers they can use still more dairy products and thus combat this stagnant attitude.

8. That the dairy industry continue its advertising program of supplementing dairy industry advertising with individual dairy brand advertising, but that the greater emphasis be placed on industry advertising. It is believed industry advertising would be more influential than would brand advertising in bringing about increased total consumption of dairy products.

Theoretically, when there are one or more brands of fluid milk competing in one market, the demand for any one of these brands is elastic. Under such conditions effective brand advertising by one individual fluid milk seller can be instrumental in causing consumers to shift to his brand of milk. Consumer purchase of various brands of milk may be altered by this type advertising, but this type of advertising is not normally directed in such a way as to influence consumers total consumption. Shifting from one brand of milk to another does not necessarily bring about an increase in total milk consumption. Only to the degree that continued mention of milk or other dairy products may influence total purchases will brand advertising bring about any increase in total dairy product consumption.

The type of advertising which is most likely to bring about increases in total dairy product consumption is that type which can effectively direct consumer purchases away from competing products. Theoretically, industry type advertising is most likely to accomplish this end. When one considers the demand for all the milk competing in the foremention

market it becomes inelastic. The effectiveness of brand advertising is minimized under such conditions. Industry advertising, on the other hand, can presumably be effective under such conditions since it directs its emphasis on the purchase and consumption of milk with no concern for the brand and thus attempts to encourage consumption of milk instead of competing foods.

As indicated in the presentation, this analysis is theoretical. It is felt, however, that the theory lessens its immediate value to the industry. In view of this shortage of information and the lack of similar information in other areas, it is recommended that studies concerned with the following subjects be conducted:

(1) A study to determine the effect of brand and industry advertising total consumption of dairy products.

(2) Controlled studies in which the effect of both advertising and price on dairy product consumption can be measured.

(3) A study to determine the dollar cost and return from advertising done through the various advertising media.

(4) A study to analyze the effectiveness and influence of store specials as a means of merchandising dairy products.

(5) A study to determine to what extent or degree those who feel they are influenced by dairy advertising are actually influenced.

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A P P E N D I X

SUMMARY OF EXPERIMENTAL MAIL QUESTIONNAIRES

The long form questionnaire

On February 11, 1955, 100 long, five page questionnaires were sent to housewives in Salt Lake City and Ogden, Utah. The respondents were selected at random from the telephone directory. By February 23, there were 21 questionnaires returned, with an additional three questionnaires being returned during the ensuing two weeks. Of the 24 questionnaires returned, five were considered to be useable, seven were answered completely and 12 were useable in major part.

A total of 46 questionnaire-questions were asked with some containing more than one part. Thirteen of these questions were answered completely by all 24 respondents, while 37 of the 46 questions were answered completely by 20 or more of the respondents. One question was interpreted correctly by only eleven respondents, the lowest total for any question. The most common type error found in this study was the unanswered question. In addition many questions were only partly answered. The type question most frequently left unanswered or only partially answered was the "why?" and "opinion" type in which the respondent was asked to write in the answer.

This study revealed that approximately one-fifth of the total questionnaires was returned as useable data. The following cost calculations were prepared on this basis of percentage return for obtaining 1500 total useable sample:

1. Total number of questionnaires to be sent in--7500
2. Cost for envelopes (two per questionnaire) @ $4.24/1000 $83.75
3. Cost for postage @ $.06 per questionnaire for 7500 450.00

4. Cost for mimeographed paper. 15 reams @$1.35	20.25
5. Cost for returned postage @ $.07 for 1500 questionnaires	105.00
Total stationary and postage costs	659.00
Unit cost for 1500 returned samples	.44

The $.44 unit cost derived from these calculations include only material and postage costs. This unit cost would be increased by the inclusion of clerical assembly and tabulation costs.

Post card questionnaire

On February 11, 1955, 100 post card questionnaires were sent to housewives in Salt Lake City and Ogden, Utah areas. Respondents were selected at random from the telephone directory. A total of 20 questionnaires were returned and all were considered useable in whole or in major part. Six questions were asked and, of that total, four were answered completely by all respondents. One question was not answered by five respondents and one question was answered ambiguously by four respondents. Both questions were of the "why?" type in which the respondent was asked to write-in the answer.

The study showed that one-fifth of the total sample was returned as useable data. Using this return percentage as a basis the following cost calculations were prepared for obtaining a total sample of 1500 respondents:

1. Total number of questionnaires to be sent in--7500	
2. Cost for post card and postage $.02 per questionnaire	$150.00
3. Cost for returned postage @$.03 for 1500 questionnaires	45.00
Total card and postage costs	$195.00
Unit cost for 1500 questionnaires	.13

House to house questionnaire

The following costs were incurred the data for this study by means of the house to house method:

1. Number of samples taken--1200	
2. Cost for mimeograph paper. 3 reams @$1.35	$4.05
3. Cost for wages of enumerators @$1.00 per hour	572.00
4. Cost for meals and lodging for enumerators	369.51
5. Cost for mileage of field work for house to house visits	254.04
Total cost for supplies and field work	$1199.59
Unit cost for 1200 samples	1.00

The procedures and findings of this study are summarized as a main section of this paper.

Conclusions

1. A higher percentage of the long form questionnaire was returned but the percentage of useable returned questionnaires was approximately the same for both the long and post card questionnaires.

2. "Why?" and "opinion" type questions requiring answers written by the respondent were the most frequently omitted or partially answered.

3. The use of the post card type questionnaire is deemed to be unsatisfactory for this type study despite its higher percentage of correctly answered questions.

4. The use of the mail type questionnaire is deemed to be inferior to that of the house-to-house method for this type study. It is believed that more complete and valid information can be obtained through the latter method. The house-to-house method makes possible the minimizing of incomplete and ambiguous answering. Also, this method does not limit the sample area to telephone owners and thus makes possible the drawing of a more representative sample.

5. Despite the lower unit cost for obtaining the sample by mail it is believed that obtaining more complete and valid information from a more representative sample area justifies the additional expense of the house-to-house method.

Sample Characteristic Tables

Table 53. Sex of respondents, consumer opinion survey, Utah, 1955

Sex	Number	Per cent of Total
Male	85	07
Female	1115	93
TOTAL	1200	100

Table 54. Age of respondent--consumer opinion survey, 1200 respondent, Utah, 1955

Age	Number	Per cent of Total
(Years)		(per cent)
20 or younger	31	3
21-30	328	28
31-40	383	32
41-50	225	19
Over 50	208	18
TOTAL	1175	100

Table 55. Marital status of respondent, consumer opinion survey--1200 respondents, Utah, 1955

Marital Status	Number	Per cent of Total (Per cent)
Married	1131	94
Widowed	36	3
Divorced	4	1
Unmarried	29	2
TOTAL	1200	100

Table 56. Length of marriage of respondents, consumer opinion survey--1200 respondents, Products, Utah, 1955

Years Married (years)	Number	Per cent of Total (per cent)
5 and less	179	16
6-10	229	20
11-15	193	17
16-20	182	16
Over 20	352	31
TOTAL	1135	100

Unmarried 29
No reply 36

Table 57. Source of income of respondents, consumer opinion survey--1200 respondents, Utah, 1955

Source of Income	Number	Per cent of Total (per cent)
Full-time farm (dairy)	16	1
Full-time farm (others)	66	6
Non-farm	1073	90
Part-time farm (dairy)	11	1
Part-time farm (other)	33	2
TOTAL	1199	100

No reply 1

Table 58. Family income of respondent, consumer opinion survey--1200 respondents, Utah, 1955

Amount of yearly income (dollars)	Number	Per cent of Total (per cent)
Less than 3000	223	19
3000-5000	672	57
5000-7500	215	18
More than 7500	74	6
TOTAL	1184	100

No reply 16

Table 59. Race of respondent, consumer opinion survey--1200 respondents, Utah, 1955

Race	Number	Per cent of Total
White	1160	97
Negro	40	03
TOTAL	1200	100

Table 60. Size of household of respondent, consumer opinion survey--1200 respondents, Utah, 1955

Size of Household	Number	Per cent of Total	Total People In Families
2 and under	242	20	452
2-4	535	45	1908
5-6	332	28	1769
7 and over	89	7	699
TOTAL	1198	100	4828

2 No reply

Table 61. Age composition of household of respondent, consumer opinion survey--1200 respondents, Utah, 1955

Number in Household	Age of Household Members: Adults		Teen-ages (12-18)		Children (under 12)	
	Number	Per cent of total	Number	Per cent of total	Number	Per cent of total
		(per cent)		(per cent)		(per cent)
0	0	0.0	812	68.0	416	35.0
1	56	5.0	219	18.0	261	21.0
2	981	81.0	120	10.0	298	25.0
3	119	10.0	38	3.0	133	11.0
4 and over	44	4.0	11	1.0	92	8.0
TOTAL	1200	100	1200	100	1200	100.0

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UTAH STATE AGRICULTURAL COLLEGE DEPARTMENT OF
AGRICULTURAL ECONOMICS AND MARKETING, LOGAN, UTAH

Consumer Opinion Survey of Advertising and Marketing of Dairy Products

POWDERED AND FLUID MILK

_____ 1. How many glasses of milk do you drink each day? _____

_____ 2. How many glasses of milk do you think a child under 12 yrs should drink daily? _____

_____ 3. How many glasses of milk do you think a teenager should drink each day? _____

_____ 4. How many glasses of milk do you think an adult should drink each day?

_____ 5. If there is a difference between no. 1 and no. 4 list reasons why.

_____

_____

6. How much of the following types of fluid milk are used in your household each week?

_____ a. Pasteurized whole milk _____qts.
_____ b. Skimmed milk from store or dairy _____qts.
_____ c. Raw milk _____qts.
_____ d. Evaporated milk _____cans

_____ 7. From what source have you obtained most of your fluid milk during the past year?

a. Buy it at the grocery store _____
b. Delivered by milkman _____
c. Own our own cow _____
d. Buy it from our neighbors who own cow _____

_____ 8. (If milk is delivered) Why do you purchase milk from your present dairy? _____

_____

_____

_____

_____ 9. (If milk is purchased from store) Why do you purchase your present brand of milk? _____

_____

_____

_____

b. Why do you buy at store instead of having it delivered? _____

_____

Enumerator _____

10. (If bought from neighbors) Why do you purchase your milk from neighbors? _____

_____

_____

11. Has your family consumption of the following beverages changed during the past year:

	Increased	Decreased	About Same
Coffee			
Juices			
Milk			

a. Milk, why? _____

_____

12. What is there about fluid milk which limits its use in your household?

_____

_____

_____

13. What is grade A milk? _____

_____

_____

14. How many pounds of powdered milk do you use in your home each week?

a. What portion (%) is used as a beverage? _____

b. What portion (%) is used in cooking? _____

15. Have you noticed any changes in the solubility of your powdered milk recently? Yes____ No____

a. Since powdered milk has been made to dissolve more readily, has your purchase of it increased____ decreased____ been unaffected____

16. Does your total consumption of fluid milk decrease when you use powdered milk? Yes____ No____

17. What is there about powdered milk which limits its use in your household? _____

_____

_____

18. What percent of fluid or powdered milk do you use in the following?

	Fluid Milk (%)	Powdered Milk (%)
Cooking		
Baking		
Flavored drinks		
Beverages		
Feed for pets		

19. (If not using powdered milk) Why don't you use powdered milk?

_____

_____

COTTAGE CHEESE

20. How much cottage cheese is used in your household each week? _____ lbs.

21. What size package do you normally buy? _____
Which type, curd, or style do you prefer? _____

22. Which of the following types of packages do you prefer?

a. Transparent top _____ c. Metal top _____
b. Plain top _____ d. Other _____
e. No preference _____

23. Which of the following is the main reason for your purchasing cottage cheese?

a. Is economical compared with other foods _____
b. Like the taste _____
c. Nutritional value is high compared with other foods _____
d. It has many uses _____
e. It is not fattening _____
f. Others (list) _____

24. Which of the following is the main use for cottage cheese in your home

a. Deserts ___ Part of main course of meal ___ Salads ___ Others (list

25. What is there about cottage cheese which limits its use in your household? _____

_____

26. (If not using cottage cheese) Why don't you use cottage cheese?

_____

_____

ADVERTISING

27. Milk Companies make various statements about milk. Which of the following statements do you believe is true of milk:

_____ a. You get a "lift" from milk. True___ False___ ?___

_____ b. Milk helps eyesight. True___ False___ ?___

_____ c. Milk is your most practical source of calcium. True___ False___ ?___

_____ d. Whole fluid milk is not fattening. True___ False___ ?___

_____ e. You never outgrow your need for milk. True___ False___ ?___

_____ f. People from 6 to 60 years of age should drink 3 glasses of milk daily. True___ False___?___

_____ g. Milk helps relax your nervous system. True___ False___?___

_____ h. You can lose weight comfortably on a high protein milk diet. True___ False___ ?___

_____ i. Milk is one of your lowest priced foods. True___ False___ ?___

_____ 28. Do you have a television set? Yes___ No___

_____ a. When do you view television most? Afternoon___ Night___ Morning ____

_____ b. Do you normally use the television as a shopping aid in purchasing (a) Dairy products? Yes___No___ (b) Other food? Yes___No____

_____ c. Have you noticed any advertising of dairy products on it recently? Yes___ No___

_____ d. If so, please describe:

Program	Sponsor	Describe Advertising

a. Do you subscribe to a local newspaper? Yes___ No___

b. Is your local and daily newspaper the same paper? Yes___ No___

29. Do you subscribe to a daily newspaper? Yes___ No___

a. Do you normally use the local newspaper as a shopping aid in purchasing (a) Dairy products? Yes___ No___ (b) Other food? Yes___ No___

b. Have you noticed any advertising of dairy products in it recently? Yes___ No___

c. If so, please describe _____

_____

_____

30. Do you own a radio? Yes___ No___

a. When do you listen to it most? Afternoon___ Night___ Morning___

b. Do you normally use the radio as a shopping aid in purchasing Seldom___ Occas.___ Reg.___
(a) Dairy products? Yes___ No___ (b) Other food? Yes___ No___

c. Have you heard any advertising of dairy products on it recently? Yes___ No___

d. If so, please describe:

Program	Sponsor	Describe Advertising

31. Of the advertising that you have observed in the past, which type appealed to you most in the sense of encouraging you to purchase dairy products? (Check One)

a. Store Advertising___ TV Advertising___ Newspaper Advertising___ Radio Commercial___

b. Why? _____

_____

32. Have you ever purchased dairy products because the makers of the products sponsor a television program that you like? Yes___ No___

33. Have your children asked you to buy any dairy products that they have seen advertised on:

a. Television? Yes___ No___

b. If so, what products? _____

c. Radio? Yes___ No___

d. If so, what products? _____

34. Rate the following methods of advertising and promotion as they affect you in encouraging you to purchase dairy products. (Rate them excellant good, or poor).

_____ a. Testimonials by celebrities about dairy products _____

_____ b. Cartoons about dairy products _____

_____ c. Slogans about dairy products _____

_____ d. Store specials on dairy products _____

_____ e. Receiving gifts from companies by sending in carton tops or labels from their dairy products _____

_____ f. Demonstrations of quality or use in store (point of sale)_____

_____ 35. Does the advertising of fluid milk encourage you and your family to use it? Yes____ No____

_____ a. Does the advertising of other dairy products (cottage cheese, cheese powdered milk, ice cream, etc.) encourage you to use them? Yes____ No____

36. Do you shop for a particular brand of:

_____ a. Fluid Milk Yes ____ No ____ Don't use ____

_____ b. Powdered Milk Yes ____ No ____ Don't use ____

_____ c. Cottage Cheese Yes ____ No ____ Don't use ____

_____ d. Butter Yes ____ No ____ Don't use ____

_____ 37. Do you think you should support local (valley) dairy industry? Yes____ No____

a. Would you support local dairy industry if:

_____ (1) You had to pay slightly higher prices? Yes____ No____

_____ (2) You had to pay considerably higher prices? Yes____ No____

_____ 38. Do your children eat the school lunch meal? Yes____ No____

_____ a. How long? _____yrs.

_____ b. Since the schools began, this year, serving additional milk at nominal or no extra cost, do your children drink (more_____ less_____ about the same_____) amount of milk at home as they did before?

_____ 49. During the past few years the amount of advertising of dairy products has been increased. Do you think this advertising has affected the price of dairy products you buy? Increased_____ decreased_____ no affect_____.

PERSONAL DATA

_____ 39. Sex? Male_____ Female_____

_____ 40. What is your age? _____yrs.

_____ 41. Are you married? Yes____ No____ How long? _____yrs.

_____ 42. How many persons normally eat in your household each day? _____

_____ (a) adults_____ (b) teenagers (12-18)_____ (c) children (under 12)____

_____ 43. What is your source of income?

Full time farm (dairy) _____ Part time farm (dairy) _____
Full time farm (other) _____ Part time farm (other) _____
Non-farm _____

_____ 44. How much is your weekly food expenditure (including expenditures for dairy products)? _____

_____ 45. It would be most helpful in completeing this survey to approximate the annual buying power of your family: (Net Income)

a. Under $3000 per year _____
b. $3000 to 5000 per year _____
c. $5000 to 7500 per year _____
d. $7500 and over _____

_____ 46. What is the occupation of the head of the household? _____

_____ 47. Town in which survey was taken _____

_____ 48.