

PACKAGED FLUID MILK SALES IN FEDERAL MILK ORDER MARKETS:

**BY SIZE AND TYPE OF CONTAINER
AND DISTRIBUTION METHOD
DURING NOVEMBER 1993**



**DAIRY DIVISION/AGRICULTURAL MARKETING SERVICE
U.S. DEPARTMENT OF AGRICULTURE/WASHINGTON, D.C.**



Preface

This publication presents information relating to the containers in which fluid milk products are sold, and the methods of distribution used to market these items by handlers regulated under Federal milk marketing orders. These orders are established under the authority of the Agricultural Marketing Agreement Act of 1937.

The information in this report is based on a survey of fluid milk sales under Federal milk marketing orders during November 1993. Its purpose was to update a similar survey in November 1991, and to see if trends observed in past surveys are continuing. Data were obtained from milk handlers regulated under 38 marketing orders.

The data in this report are for volume weights of milk in 1,000 pounds. The number of each size of container can be approximated by dividing the weights shown in the report by the conversion factors shown in Appendix C.

This is the eighteenth report in a series. Similar data have been distributed based on surveys made in November 1963 through 1967, 1969, and every other year through 1991.

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INTRODUCTION

Handlers regulated under Federal milk orders process approximately three-quarters of all the fluid milk products sold in the United States. In general, the sizes and types of containers, and methods of distribution used to market this production would be representative of the entire country. In addition, although these surveys are based on November fluid milk sales, the relationships shown would be representative in other months of the year. Two exceptions would be sales in half-pint containers and sales through school outlets which would not be applicable to sales in a nonschool month.

In general, the historical trend has shown a shift in fluid milk sales from glass to paper to plastic containers, from small to large containers, and from home-delivery to wholesale delivery.

DEFINITIONS

Type of Container. Containers are categorized by glass, paper, and plastic. Containers larger than one gallon shown in the glass category are metal cans. The paper category includes plastic-coated and wax-coated containers. Plastic includes rigid plastic containers, plastic pouches, and corrugated paper boxes or plastic containers with plastic linings. Containers larger than one gallon shown in the plastic column, for the most part, are bag-in-box containers.

Method of Distribution. Sales are divided into home-delivery and wholesale. Home-delivery includes sales to homes or sales to others for delivery to homes. In some instances, home-delivery may include minor sales to institutions and vendors. Wholesale includes all sales other than home-delivered. Wholesale is broken down into chain stores, institutional outlets, and all other.

Chain stores are defined as 11 or more stores (supermarket, dairy, or convenience) nationwide, primarily engaged in food retailing, and either being under common management, being franchised by a common company, or belonging to a common purchasing association. Chain stores are categorized into supermarkets or dairy and convenience stores. Also identified are vertically integrated chain stores. A chain of stores is vertically integrated if the fluid milk products sold in its stores are processed by a plant owned by the chain.

Institutional outlets are military installations and schools (elementary, high school, colleges, and universities). All other wholesale outlets include nonchain food stores, nonfood stores (drug stores, gasoline stations, etc.), restaurants, hotels, hospitals, nursing homes, vending machines, and any other type of wholesale outlet.

HISTORICAL PERSPECTIVE

There has been a significant historical change in the types and sizes of containers in which fluid milk products have been sold and in the methods of distribution used to sell these products. The trend has been from glass to paper to plastic containers, from small to large containers, and from home-delivery to wholesale delivery. Some factors often cited in explaining these trends are: changes in consumer preferences and life styles; significant changes in the costs of packaging materials and delivery systems; technological developments in the container industry, particularly containers produced from by-products of the petroleum industry; and the increasing market share of supermarkets which brought about an additional handling of fluid milk containers by consumers.

In the first survey taken in 1963, sales of fluid milk products in glass containers accounted for about 32 percent and plastic accounted for 15 percent of the total. In the most recent survey, over 74 percent of fluid milk products were sold in plastic containers, 25 percent in paper containers, with less than one-half percent remaining in glass containers.

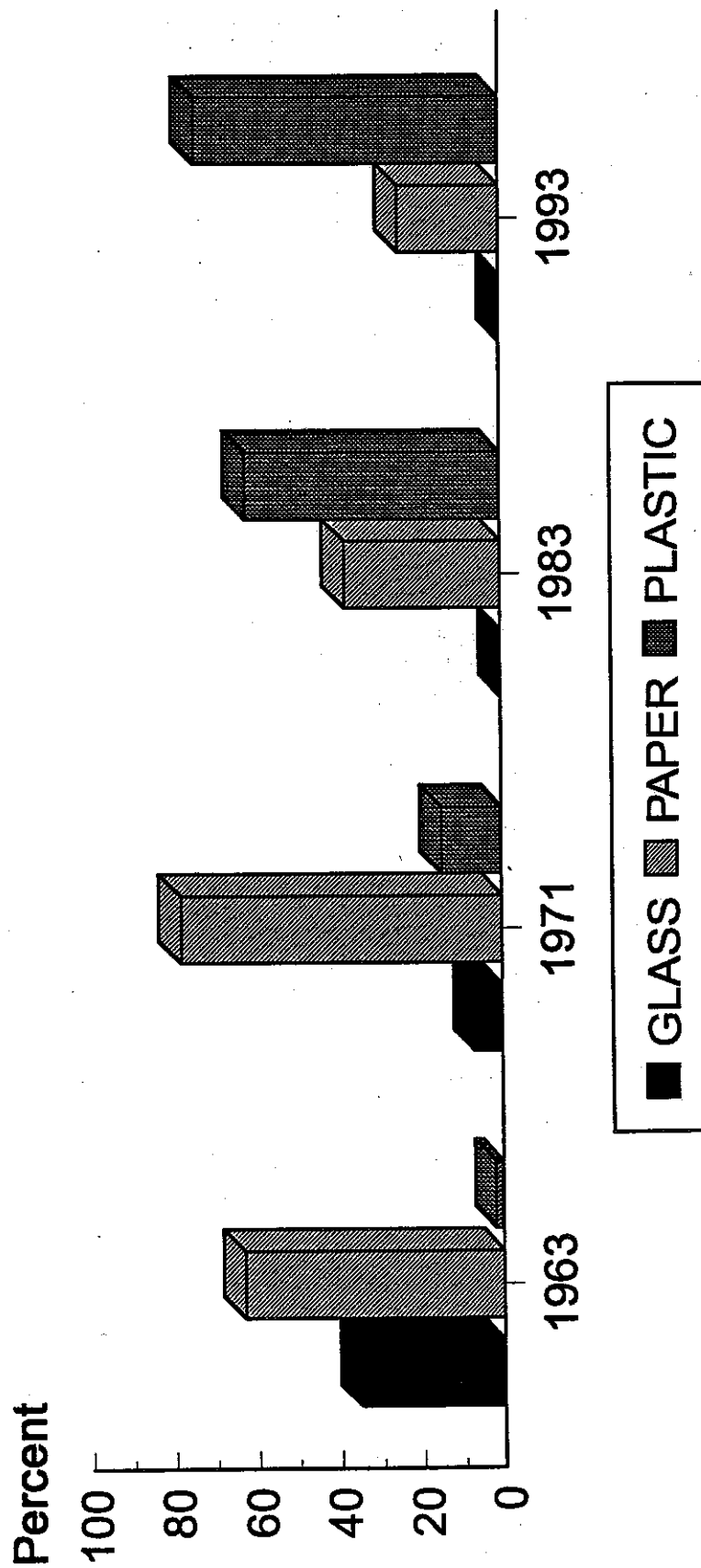
In November 1993, over 64 percent of fluid milk sales were made in gallon containers. This market share has more than doubled since 1971 and is nearly five times greater than the share found in the 1963 survey. This increase has come at the expense of half-gallons for which the market share has dropped from 56 percent of total sales in 1963 to 19 percent in 1993, and at the expense of quarts whose market share decreased from 15 percent to 4 percent during the same time period.

The importance of home-delivery of milk had decreased with every survey that had been taken through 1989. Since the first survey in 1963, the market share has dropped from about 30 percent to one percent in the last three surveys.

Surveys made prior to 1977 categorized all methods of distribution other than home-delivery as wholesale. Since 1977, information on the following types of wholesale distribution have been surveyed: food chain stores--supermarkets and dairy/convenience stores; institutional outlets--military and schools; and all other wholesale. Sales of fluid milk products in supermarket chain stores continued to be the predominant method of wholesale distribution with 57 percent of the market share in the most recent survey, up from 55 percent in November 1991. The market share for convenience stores increased slightly from the 1991 survey. The market share of vertically integrated food chain stores increased slightly from November 1991. The market share for the "all other" category, of which nonchain food stores are the larger proportion, decreased to about 23 percent.

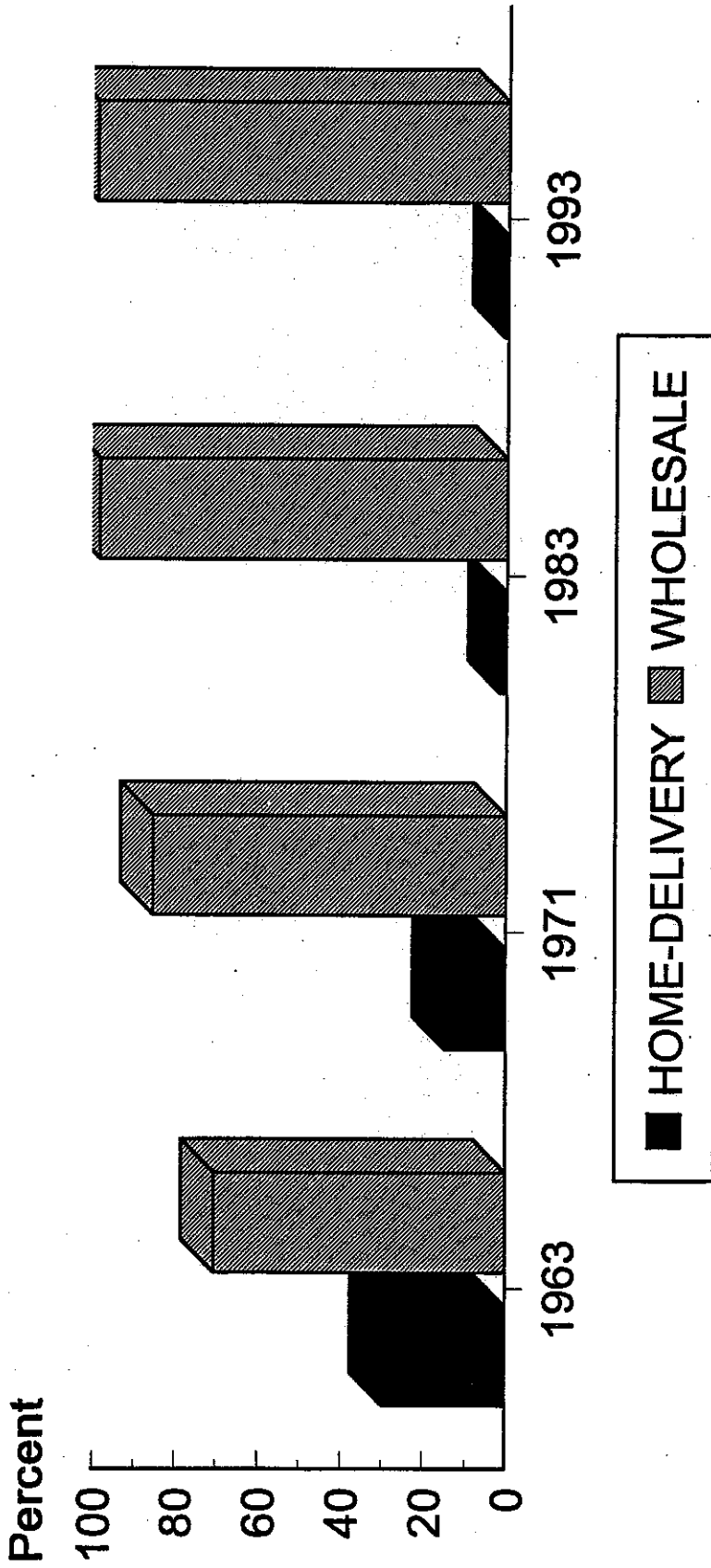
The following charts and tables provide historical information from past surveys and detailed information from the current survey. Information is presented for individual Federal milk order marketing areas, regional groups of these markets, and for all markets combined. Additional information is shown in the appendices at the end of the report.

CHART 1--FLUID MILK SALES BY TYPE OF CONTAINER, NOVEMBER OF SELECTED YEARS



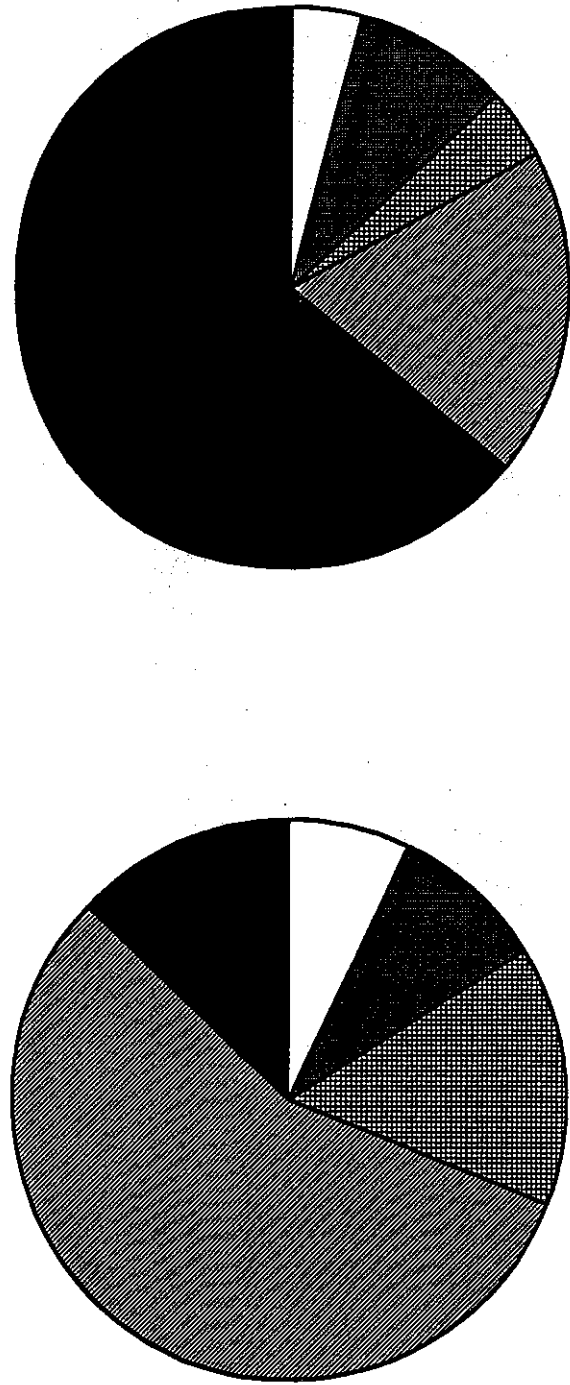
(Data for Chart in Table 1)

CHART 2--FLUID MILK SALES BY METHOD OF DISTRIBUTION, NOVEMBER OF SELECTED YEARS



(Data for Chart in Table 7)

**CHART 3--FLUID MILK SALES BY SIZE OF CONTAINERS,
NOVEMBER 1963 AND 1993**



1993

1963



(Data for Chart in Table 2)

TABLE 1--PERCENTAGE OF WHOLE MILK ITEMS, LOWFAT AND SKIM MILK ITEMS, AND TOTAL FLUID MILK ITEMS SOLD BY TYPE OF CONTAINER, BY HANDLERS REGULATED UNDER FEDERAL MILK ORDERS, NOVEMBER OF SELECTED YEARS 1/, 1963-1993

Year	Glass	Paper	Plastic	Other 2/	Total
	<u>Whole Milk Items 3/</u>				
1963	33	62	4/	5	100
1967	21	70	8	1	100
1971	7	77	16	*	100
1975	3	66	31	*	100
1979	1	48	51	*	100
1983	*	36	63	*	100
1987	*	33	67	*	100
1991	*	28	72	*	100
1993	*	25	75	*	100
	<u>Lowfat and Skim Milk Items 5/</u>				
1963	25	73	4/	2	100
1967	16	79	4	1	100
1971	6	83	11	*	100
1975	2	69	29	*	100
1979	1	51	48	*	100
1983	*	40	60	*	100
1987	*	33	67	*	100
1991	*	28	72	*	100
1993	*	26	74	*	100
	<u>Total Fluid Milk Items 6/</u>				
1963	32	63	4/	5	100
1967	20	71	8	1	100
1971	7	78	15	*	100
1975	2	67	31	*	100
1979	1	49	50	*	100
1983	*	38	62	*	100
1987	*	33	67	*	100
1991	*	28	72	*	100
1993	*	25	74	*	100

* Less than one-half of one percent.

1/ Based on total sales including both wholesale and home-delivered. See Appendix D for the Federal milk order markets included in current survey.

2/ Percentages represent metal cans and plastic bag-in-box containers in 1963; metal cans only, 1967 to date.

3/ Whole milk items include plain and flavored whole milk products.

4/ Data not available.

5/ Lowfat and skim milk items include plain, fortified, and flavored skim and lowfat milk, and buttermilk products.

6/ Whole milk items, and lowfat and skim milk items combined.

TABLE 2--PERCENTAGE OF WHOLE MILK ITEMS, LOWFAT AND SKIM MILK ITEMS, AND TOTAL FLUID MILK ITEMS SOLD BY SIZE OF CONTAINER, BY HANDLERS REGULATED UNDER FEDERAL MILK ORDERS, NOVEMBER OF SELECTED YEARS 1/, 1963-1993

Year	Gallon	Half-gallon	Quart	Pint	Half-pint	Over 10 quarts	Other	Total
<u>Whole Milk Items 2/</u>								
1963	14	56	14	1	10	5**	*	100
1967	20	52	8	1	12	5	2	100
1971	30	41	10	1	13	4	1	100
1975	43	33	7	1	11	4	1	100
1979	52	26	6	2	10	3	1	100
1983	58	23	6	2	7	3	*	100
1987	60	21	6	3	8	3	*	100
1991	63	19	5	3	7	2	*	100
1993	64	19	5	3	7	2	*	100
<u>Lowfat and Skim Milk Items 3/</u>								
1963	5	56	32	1	4	2**	*	100
1967	16	61	16	1	3	2	1	100
1971	27	55	11	1	3	2	1	100
1975	44	38	6	1	8	2	1	100
1979	54	26	4	1	12	2	1	100
1983	58	22	4	1	13	2	*	100
1987	61	21	4	1	11	2	*	100
1991	64	19	4	*	10	2	*	100
1993	64	19	3	1	11	2	*	100
<u>Total Fluid Milk Items 4/</u>								
1963	13	56	15	1	9	5**	1	100
1967	19	53	9	1	11	5	2	100
1971	29	44	10	1	11	3	2	100
1975	43	34	7	1	11	3	1	100
1979	53	26	5	1	11	3	1	100
1983	58	23	5	1	10	3	*	100
1987	60	21	5	2	10	2	*	100
1991	64	19	4	1	9	2	*	100
1993	64	19	4	2	9	2	*	100

* Less than one-half of one percent.

** Percentage includes "5-10 quart" containers.

1/ Based on total sales including both wholesale and home-delivered. See Appendix D for the Federal milk order markets included in current survey.

2/ Whole milk items include plain and flavored whole milk products.

3/ Lowfat and skim milk items include plain, fortified, and flavored skim and lowfat milk, and buttermilk products.

4/ Whole milk items, and lowfat and skim milk items combined.

TABLE 3—SUMMARY OF FLUID MILK SALES BY SIZE AND TYPE OF CONTAINERS, BY HANDLERS REGULATED UNDER 38 FEDERAL MILK ORDERS, NOVEMBER 1993 1/

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
	Thousand pounds			
	<u>Whole milk items 3/</u>			
Gallon	**	**	859,826	860,244
Half-gallon	1,768	132,035	114,807	248,610
Quart	303	62,651	2,473	65,427
Pint	0	43,785	1,545	45,330
Half-pint	0	92,847	2,569	95,416
6-Gallon	204	0	7,087	7,291
5-Gallon	**	0	13,917	13,918
All other sizes	0	3,948	1,316	5,264
Total of all sizes	2,295	335,665	1,003,540	1,341,500
	<u>Lowfat and skim milk items 4/</u>			
Gallon	**	**	1,564,922	1,569,812
Half-gallon	4,989	263,326	195,605	464,088
Quart	355	79,903	1,925	82,236
Pint	0	11,567	533	12,141
Half-pint	**	253,470	9,082	262,587
6-Gallon	**	0	9,966	10,203
5-Gallon	**	0	33,122	33,137
All other sizes	**	12,109	3,716	15,954
Total of all sizes	5,764	625,268	1,819,126	2,450,158
	<u>Total fluid milk items 5/</u>			
Gallon	**	**	2,424,748	2,430,056
Half-gallon	6,757	395,361	310,412	712,698
Quart	658	142,554	4,398	147,663
Pint	0	55,352	2,078	57,471
Half-pint	**	346,317	11,651	358,003
6-Gallon	204	0	17,053	17,494
5-Gallon	**	0	47,039	47,055
All other sizes	**	16,057	5,032	21,218
Total of all sizes	8,059	960,933	2,822,666	3,791,658

** Represents sales made by fewer than three handlers which cannot be shown without revealing the volume of their individual business. Quantities are included in the totals.

1/ Based on total sales including both wholesale and home-delivered. See Appendix D for the Federal milk order markets included.

2/ Five-gallon and six-gallon containers under glass represent metal can; under plastic represent mostly bag-in-box containers.

3/ Whole milk items include plain and flavored whole milk products.

4/ Lowfat and skim milk items include plain, solids added, and flavored lowfat and skim milk, and buttermilk products.

5/ Whole milk items, and lowfat and skim milk items combined.

TABLE 4--TOTAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS, NOVEMBER 1993 1/

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
Thousand pounds				
<u>Alabama-West Florida</u>				
Gallon	0	0	57,362	57,362
Half-gallon	0	6,258	12,823	19,081
Quart	0	3,197	**	3,197
Pint	0	2,405	**	2,405
Half-pint	0	12,829	0	12,829
6-Gallon	0	0	**	**
5-Gallon	0	0	436	436
All other sizes	0	63	379	442
Total of all sizes	0	24,752	71,001	95,753
<u>Carolina</u>				
Gallon	0	**	114,704	114,704
Half-gallon	0	7,139	25,615	32,754
Quart	0	4,713	**	4,713
Pint	0	2,991	0	2,991
Half-pint	0	21,641	**	21,641
6-Gallon	0	0	613	613
5-Gallon	0	0	1,053	1,053
All other sizes	0	739	1,359	2,098
Total of all sizes	0	37,223	143,344	180,567
<u>Central Arizona</u>				
Gallon	0	0	67,241	67,241
Half-gallon	0	8,869	**	8,869
Quart	0	2,484	**	2,484
Pint	0	1,100	**	1,100
Half-pint	0	6,443	0	6,443
6-Gallon	0	0	1,219	1,219
5-Gallon	0	0	0	0
All other sizes	0	207	1,534	1,741
Total of all sizes	0	19,103	69,993	89,096

CONTINUED

TABLE 4—TOTAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS, NOVEMBER 1993 1/-CONTINUED

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
Thousand pounds				
<u>Central Arkansas</u>				
Gallon	**	0	15,231	15,231
Half-gallon	**	**	3,791	3,791
Quart	0	722	0	722
Pint	0	768	0	768
Half-pint	0	4,357	0	4,357
6-Gallon	0	0	0	0
5-Gallon	0	0	659	659
All other sizes	65	961	0	1,026
Total of all sizes	65	6,807	19,681	26,553
<u>Chicago Regional</u>				
Gallon	**	**	149,855	149,855
Half-gallon	1,198	5,380	21,499	28,077
Quart	0	6,539	**	6,539
Pint	0	1,177	**	1,177
Half-pint	0	18,727	392	19,119
6-Gallon	0	0	**	**
5-Gallon	0	0	3,349	3,349
All other sizes	8	2,503	749	3,260
Total of all sizes	1,206	34,326	175,843	211,375
<u>Eastern Colorado</u>				
Gallon	0	0	39,562	39,562
Half-gallon	0	9,372	**	9,372
Quart	0	2,244	0	2,244
Pint	0	968	0	968
Half-pint	0	4,110	0	4,110
6-Gallon	0	0	478	478
5-Gallon	0	0	538	538
All other sizes	0	80	1,286	1,366
Total of all sizes	0	16,775	41,865	58,640

CONTINUED

TABLE 4--TOTAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS, NOVEMBER 1993 1/-CONTINUED

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
Thousand pounds				
<u>Eastern Ohio-Western Pennsylvania</u>				
Gallon	0	**	98,257	98,257
Half-gallon	**	24,359	6,345	30,704
Quart	**	5,106	340	5,446
Pint	0	1,927	**	1,927
Half-pint	0	12,670	0	12,670
6-Gallon	0	0	550	550
5-Gallon	0	0	1,302	1,302
All other sizes	70	2,086	288	2,444
Total of all sizes	70	46,148	107,081	153,299
<u>Georgia</u>				
Gallon	0	0	82,512	82,512
Half-gallon	0	3,690	14,644	18,334
Quart	0	2,227	**	2,227
Pints	0	1,197	0	1,197
Half-pint	0	9,797	**	9,797
6-Gallon	0	0	**	**
5-Gallon	0	0	901	901
All other sizes	0	318	1,210	1,528
Total of all sizes	0	17,228	99,268	116,496
<u>Great Basin</u>				
Gallon	0	0	47,624	47,624
Half-gallon	0	4,791	3,669	8,460
Quart	0	6,952	**	6,952
Pint	0	868	**	868
Half-pint	0	5,393	0	5,393
6-Gallon	0	0	**	**
5-Gallon	0	0	2,121	2,121
All other sizes	0	40	167	207
Total of all sizes	0	18,043	53,582	71,625

CONTINUED

TABLE 4—TOTAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS, NOVEMBER 1993 1/-CONTINUED

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
	Thousand pounds			
	<u>Greater Louisiana</u>			
Gallon	0	**	25,392	25,392
Half-gallon	0	2,684	2,861	5,545
Quart	0	583	**	583
Pint	0	717	0	717
Half-pint	0	5,026	2,818	7,844
6-Gallon	0	0	0	0
5-Gallon	0	0	681	681
All other sizes	0	39	64	103
Total of all sizes	0	9,049	31,816	40,865
	<u>Indiana</u>			
Gallon	0	0	75,862	75,862
Half-gallon	0	11,541	4,002	15,543
Quart	0	2,181	**	2,181
Pint	0	922	**	922
Half-pint	0	9,640	**	9,640
6-Gallon	0	0	**	**
5-Gallon	0	0	1,996	1,996
All other sizes	0	795	2,028	2,823
Total of all sizes	0	25,078	83,888	108,966
	<u>Iowa</u>			
Gallon	0	0	55,486	55,486
Half-gallon	0	3,490	4,929	8,419
Quart	0	1,582	**	1,582
Pint	0	560	0	560
Half-pint	0	8,915	**	8,915
6-Gallon	0	0	**	**
5-Gallon	0	0	2,298	298
All other sizes	0	607	136	743
Total of all sizes	0	15,155	62,848	78,003

CONTINUED

TABLE 4—TOTAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS, NOVEMBER 1993 1/-CONTINUED

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
	Thousand pounds			
	<u>Louisville-Lexington-Evansville</u>			
Gallon	0	0	52,273	52,273
Half-gallon	0	410	7,859	8,269
Quart	0	1,089	0	1,089
Pint	0	833	0	833
Half-pint	0	4,167	821	4,988
6-Gallon	0	0	**	**
5-Gallon	0	0	665	665
All other sizes	0	46	146	192
Total of all sizes	0	6,545	61,763	68,308
	<u>Michigan Upper Peninsula</u>			
Gallon	0	0	2,564	2,564
Half-gallon	0	0	593	593
Quart	0	68	6	74
Pint	0	19	0	19
Half-pint	0	507	0	507
6-Gallon	0	0	0	0
5-Gallon	0	0	83	83
All other sizes	0	0	0	0
Total of all sizes	0	594	3,245	3,839
	<u>Middle Atlantic</u>			
Gallon	0	**	134,085	134,085
Half-gallon	613	38,226	15,092	53,931
Quart	**	13,485	255	13,740
Pint	0	4,812	173	4,985
Half-pint	**	20,611	1,345	21,956
6-Gallon	0	0	726	726
5-Gallon	0	0	2,917	2,917
All other sizes	66	2,108	50	2,224
Total of all sizes	679	79,242	154,642	234,563

CONTINUED

TABLE 4--TOTAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS, NOVEMBER 1993 1/-CONTINUED

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
	Thousand pounds			
	<u>Nebraska-Western Iowa</u>			
Gallon	0	0	35,999	35,999
Half-gallon	0	3,370	4,247	7,617
Quart	0	1,246	0	1,246
Pint	0	438	0	438
Half-pint	0	5,075	0	5,075
6-Gallon	0	0	**	**
5-Gallon	0	0	1,295	1,295
All other sizes	0	552	3,723	4,275
Total of all sizes	0	10,680	45,264	55,944
	<u>New England</u>			
Gallon	0	**	128,099	128,099
Half-gallon	783	33,111	20,024	53,918
Quart	177	9,068	1,223	10,468
Pint	0	2,627	1,066	3,693
Half-pint	0	17,333	**	17,333
6-Gallon	0	0	693	693
5-Gallon	0	0	3,457	3,457
All other sizes	0	1,357	391	1,748
Total of all sizes	960	63,496	154,953	219,409
	<u>New Mexico-West Texas</u>			
Gallon	0	0	40,915	40,915
Half-gallon	0	3,647	5,805	9,452
Quart	0	1,155	**	1,155
Pint	0	735	**	735
Half-pint	0	6,014	**	6,014
6-Gallon	0	0	**	**
5-Gallon	0	0	543	543
All other sizes	0	0	378	378
Total of all sizes	0	11,551	47,640	59,191

CONTINUED

TABLE 4--TOTAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS, NOVEMBER 1993 1/-CONTINUED

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
Thousand pounds				
<u>New Orleans-Mississippi</u>				
Gallon	0	0	35,298	35,298
Half-gallon	0	3,540	7,009	10,549
Quart	0	1,230	170	1,400
Pint	0	1,239	0	1,239
Half-pint	0	9,470	**	9,470
6-Gallon	0	0	**	**
5-Gallon	0	0	**	**
All other sizes	0	94	1,086	1,180
Total of all sizes	0	15,572	43,563	59,135
<u>New York-New Jersey</u>				
Gallon	0	0	173,840	173,840
Half-gallon	2,573	107,641	8,669	118,883
Quart	301	40,047	642	40,990
Pint	0	5,646	144	5,790
Half-pint	0	31,881	1,253	33,134
6-Gallon	0	0	5,141	5,141
5-Gallon	0	0	1,719	1,719
All other sizes	0	1,684	306	1,990
Total of all sizes	2,875	186,899	191,714	381,488
<u>Ohio Valley</u>				
Gallon	0	**	101,476	101,476
Half-gallon	0	4,510	9,216	13,726
Quart	0	2,739	**	2,739
Pint	0	2,310	**	2,310
Half-pint	0	11,757	**	11,757
6-Gallon	0	0	**	**
5-Gallon	0	0	1,901	1,901
All other sizes	0	524	431	955
Total of all sizes	0	21,840	113,024	134,864

CONTINUED

TABLE 4—TOTAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS, NOVEMBER 1993 1/-CONTINUED

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
Thousand pounds				
<u>Pacific Northwest</u>				
Gallon	0	**	118,696	118,696
Half-gallon	0	31,568	1,475	33,043
Quart	0	6,535	0	6,535
Pint	0	2,459	0	2,459
Half-pint	0	9,927	0	9,927
6-Gallon	0	0	2,205	2,205
5-Gallon	0	0	602	602
All other sizes	0	496	1,198	1,694
Total of all sizes	0	50,986	124,175	175,161
<u>Southeastern Florida</u>				
Gallon	0	0	49,169	49,169
Half-gallon	0	3,783	17,209	20,992
Quart	0	3,567	**	3,567
Pint	0	1,457	**	1,457
Half-pint	0	7,113	**	7,113
6-Gallon	0	0	**	**
5-Gallon	0	0	**	**
All other sizes	0	0	2,118	2,118
Total of all sizes	0	15,921	68,497	84,418
<u>Southern Illinois-Eastern Missouri</u>				
Gallon	0	0	68,944	68,944
Half-gallon	1,123	7,500	2,114	10,737
Quart	0	2,111	**	2,111
Pint	0	952	0	952
Half-pint	0	10,774	**	10,774
6-Gallon	0	0	0	0
5-Gallon	0	0	2,807	2,807
All other sizes	0	182	226	408
Total of all sizes	1,123	21,519	74,092	96,735

CONTINUED

TABLE 4--TOTAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS, NOVEMBER 1993 1/-CONTINUED

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
Thousand pounds				
<u>Southern Michigan</u>				
Gallon	0	0	121,124	121,124
Half-gallon	**	5,937	17,523	23,460
Quart	**	3,712	171	3,884
Pint	0	2,838	**	2,838
Half-pint	0	13,857	**	13,857
6-Gallon	0	0	0	0
5-Gallon	0	0	2,037	2,037
All other sizes	317	168	72	557
Total of all sizes	317	26,511	140,928	167,755
<u>Southwest Plains</u>				
Gallon	0	**	86,926	86,926
Half-gallon	0	3,179	17,626	20,805
Quart	0	2,186	0	2,186
Pint	0	1,881	0	1,881
Half-pint	0	12,687	0	12,687
6-Gallon	0	0	0	0
5-Gallon	0	0	1,860	1,860
All other sizes	0	89	185	274
Total of all sizes	0	20,022	106,597	126,619
<u>Southwestern Idaho-Eastern Oregon</u>				
Gallon	**	0	8,138	8,138
Half-gallon	**	3,327	232	3,559
Quart	**	423	18	441
Pint	0	485	11	496
Half-pint	0	1,197	0	1,197
6-Gallon	0	0	49	49
5-Gallon	0	0	**	**
All other sizes	48	678	154	880
Total of all sizes	48	6,110	8,604	14,762

CONTINUED

TABLE 4—TOTAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS, NOVEMBER 1993 1/-CONTINUED

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
	Thousand pounds			
	<u>Tampa Bay</u>			
Gallon	0	**	46,024	46,024
Half-gallon	0	1,864	12,605	14,469
Quart	0	2,359	**	2,359
Pint	0	1,649	0	1,649
Half-pint	0	6,063	**	6,063
6-Gallon	0	0	**	**
5-Gallon	0	0	745	745
All other sizes	0	3,297	788	4,085
Total of all sizes	0	15,232	60,162	75,394
	<u>Tennessee Valley</u>			
Gallon	0	0	53,888	53,888
Half-gallon	0	1,057	9,842	10,899
Quart	0	1,280	**	1,280
Pint	0	2,475	0	2,475
Half-pint	0	9,759	0	9,759
6-Gallon	0	0	0	0
5-Gallon	0	0	1,154	1,154
All other sizes	0	531	69	600
Total of all sizes	0	15,103	64,953	80,056
	<u>Texas</u>			
Gallon	0	0	187,235	187,235
Half-gallon	0	16,134	24,436	40,570
Quart	0	5,837	**	5,837
Pint	0	4,665	0	4,665
Half-pint	0	26,624	**	26,624
6-Gallon	0	0	0	0
5-Gallon	0	0	2,723	2,723
All other sizes	0	34	465	499
Total of all sizes	0	53,294	214,859	268,153

CONTINUED

TABLE 4—TOTAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS, NOVEMBER 1993 1/-CONTINUED

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
Thousand pounds				
<u>Upper Florida</u>				
Gallon	0	0	37,760	37,760
Half-gallon	**	**	11,639	11,639
Quart	0	934	0	934
Pint	0	432	0	432
Half-pint	0	617	0	617
6-Gallon	0	0	0	0
5-Gallon	0	0	**	**
All other sizes	11	2,167	265	2,443
Total of all sizes	11	4,149	49,664	53,824
<u>Upper Midwest</u>				
Gallon	0	0	68,659	68,659
Half-gallon	**	30,482	8,659	39,140
Quart	**	3,215	0	3,215
Pint	0	781	0	781
Half-pint	0	12,877	**	12,877
6-Gallon	0	0	**	**
5-Gallon	**	0	3,997	4,000
All other sizes	359	1,356	432	2,147
Total of all sizes	359	48,712	81,746	130,815

**Represents sales made by fewer than three handlers which cannot be shown without revealing the volume of their individual operations. These data are included in "all other sizes."

1/ Based on total sales including both wholesale and home-delivery.

2/ Five-gallon and six-gallon containers under glass represent metal cans; under plastic represent mostly bag-in-box containers.

TABLE 5—INDIVIDUAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS UNDER 38 FEDERAL MILK ORDERS, NOVEMBER 1993 1/

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
	Thousand pounds			
	<u>Whole milk</u>			
Gallon	**	**	859,504	859,922
Half-gallon	1,590	128,505	111,209	241,304
Quart	242	53,004	1,832	55,078
Pint	0	21,902	946	22,848
Half-pint	0	83,160	1,588	84,748
6-Gallon	204	0	6,918	7,122
5-Gallon	**	0	13,377	13,378
All other sizes	0	3,274	1,284	4,558
Total of all sizes	2,056	290,244	996,658	1,288,958
	<u>Flavored whole milk products</u>			
Gallon	0	0	322	322
Half-gallon	178	3,530	3,598	7,306
Quart	61	9,647	641	10,349
Pint	0	21,883	599	22,482
Half-pint	0	9,687	981	10,668
6-Gallon	0	0	169	169
5-Gallon	0	0	540	540
All other sizes	0	674	32	706
Total of all sizes	239	45,421	6,882	52,542
	<u>2% lowfat milk - plain</u>			
Gallon	**	**	930,909	934,894
Half-gallon	2,392	102,042	88,403	192,837
Quart	94	22,115	531	22,740
Pint	0	2,252	197	2,449
Half-pint	0	89,393	1,983	91,376
6-Gallon	**	0	7,150	7,239
5-Gallon	**	0	23,146	23,148
All other sizes	**	2,750	1,461	4,216
Total of all sizes	2,602	222,517	1,053,780	1,278,899

CONTINUED

TABLE 5--INDIVIDUAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS UNDER 38 FEDERAL MILK ORDERS, NOVEMBER 1993 1/--CONTINUED

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
	Thousand pounds			
	<u>2% lowfat milk - milk solids added</u>			
Gallon	0	0	47,672	47,672
Half-gallon	0	5,651	10,019	15,670
Quart	0	1,829	**	1,833
Pint	0	94	**	106
Half-pint	0	1,555	355	1,910
6-Gallon	0	0	**	39
5-Gallon	0	0	361	361
All other sizes	0	289	**	307
Total of all sizes	0	9,418	58,471	67,889
	<u>1% lowfat milk - plain</u>			
Gallon	0	**	239,586	239,792
Half-gallon	1,109	43,235	23,291	67,635
Quart	84	10,615	263	10,962
Pint	0	239	**	243
Half-pint	**	18,966	132	19,125
6-Gallon	0	0	1,181	1,181
5-Gallon	**	0	1,665	1,668
All other sizes	0	1,815	**	1,842
Total of all sizes	1,223	75,076	266,149	342,448
	<u>1% lowfat milk - milk solids added</u>			
Gallon	0	0	20,155	20,155
Half-gallon	0	4,159	5,923	10,082
Quart	0	1,018	0	1,018
Pint	0	**	0	2
Half-pint	0	646	0	646
6-Gallon	0	0	**	40
5-Gallon	0	0	**	10
All other sizes	0	**	0	19
Total of all sizes	0	5,844	26,128	31,972

CONTINUED

TABLE 5—INDIVIDUAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS UNDER 38 FEDERAL MILK ORDERS, NOVEMBER 1993 1/—CONTINUED

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
	Thousand pounds			
	<u>Skim milk - plain</u>			
Gallon	**	**	274,487	274,802
Half-gallon	1,488	65,383	43,188	110,059
Quart	170	19,968	391	20,529
Pint	0	203	**	211
Half-pint	0	19,748	414	20,162
6-Gallon	**	0	968	1,001
5-Gallon	0	0	4,661	4,661
All other sizes	0	1,251	366	1,617
Total of all sizes	1,693	106,866	324,483	433,042
	<u>Skim milk - milk solids added</u>			
Gallon	0	0	39,038	39,038
Half-gallon	**	8,203	12,081	20,392
Quart	**	3,064	0	3,095
Pint	0	**	0	7
Half-pint	0	2,341	27	2,368
6-Gallon	0	0	**	**
5-Gallon	0	0	290	290
All other sizes	0	126	**	130
Total of all sizes	139	13,741	51,457	65,337
	<u>Flavored lowfat and skim milk products</u>			
Gallon	0	**	9,165	9,257
Half-gallon	**	6,171	5,987	12,195
Quart	7	6,545	550	7,102
Pint	0	8,173	336	8,509
Half-pint	0	119,696	6,171	125,867
6-Gallon	**	0	528	547
5-Gallon	0	0	2,603	2,603
All other sizes	0	5,794	1,889	7,683
Total of all sizes	63	146,471	27,229	173,763

CONTINUED

TABLE 5--INDIVIDUAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS UNDER 38 FEDERAL MILK ORDERS, NOVEMBER 1993 1/--CONTINUED

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
Thousand pounds				
<u>Buttermilk</u>				
Gallon	**	**	3,910	4,202
Half-gallon	**	28,482	6,713	35,218
Quart	**	14,749	190	14,957
Pint	0	606	**	614
Half-pint	0	1,125	**	1,133
6-Gallon	0	0	139	139
5-Gallon	0	0	396	396
All other sizes	0	84	**	149
Total of all sizes	44	45,335	11,429	56,808

** Represents sales made by fewer than three handlers which cannot be shown without revealing the volumes of their individual operations. These data are included in the totals.

1/ Based on total sales including both wholesale and home-delivery.

2/ Five-gallon and six-gallon containers under glass represent metal cans; under plastic represents mostly bag-in-box containers.

TABLE 6--PERCENTAGE OF TOTAL FLUID MILK ITEMS 1/ DISTRIBUTED BY HANDLERS REGULATED UNDER FEDERAL MILK ORDERS, GROUPED BY REGION, BY TYPE AND SIZE OF CONTAINER, NOVEMBER 1993

Region 2/	Total sales of fluid milk items	Type of Container		
		Glass	Paper	Plastic
	<u>Mil. lbs.</u>		<u>Percent of total sales</u>	
North Atlantic	835.8	0.6	39.4	60.0
Southeast	686.5	*	18.9	81.1
East North Central	945.1	0.3	19.3	80.4
West North Central	264.8	0.1	28.2	71.7
Southwest	521.3	*	20.1	79.9
Mountain	293.3	*	24.4	75.6
Pacific	175.2	0	29.1	70.9
Total 4/	3,791.7	0.2	25.3	74.5

Region 2/	Size of Container						
	Gallon	Half-gallon	Quart	Pint	Half-pint	5 and 6 gallon	All other sizes
	<u>Percent of total sales</u>						
North Atlantic	52.3	27.1	7.8	1.7	8.7	1.8	0.6
Southeast	64.4	18.9	2.8	1.9	10.3	0.9	0.8
East North Central	71.3	13.9	2.6	1.2	8.9	1.6	0.5
West North Central	60.5	21.0	2.3	0.7	10.2	4.3	1.0
Southwest	67.2	15.8	2.1	1.8	11.8	1.2	0.1
Mountain	69.4	14.5	4.6	1.4	7.9	1.8	0.4
Pacific	67.8	18.9	3.7	1.4	5.7	1.6	0.9
Total 4/	64.1	18.8	3.9	1.5	9.4	1.7	0.6

*Less than one-tenth of one percent.

1/ Fluid milk items include plain and flavored whole milk products; plain, fortified, and flavored skim and lowfat milk products; and miscellaneous whole, lowfat and skim milk products.

2/ See Appendix D for the Federal milk order markets included in each region.

3/ Also includes metal cans.

4/ Includes those Federal milk order markets for which all of the data were restricted--pertains to fewer than three processing plants. See Appendix D.

TABLE 7--PERCENTAGE OF FLUID MILK ITEMS 1/ DISTRIBUTED BY HANDLERS REGULATED UNDER FEDERAL MILK ORDERS, BY METHODS OF DISTRIBUTION, AND TYPE OF WHOLESALE OUTLET, NOVEMBER OF SELECTED YEARS, 1963 TO 1993

Month/Year	Method of Distribution							All other 4/
	Home-delivery	Total wholesale	Type of wholesale outlet 2/				Schools	
			Food chain stores 3/		Military	Institutional		
			Supermarket	Dairy and convenience				
Percent								
November								
1963	29.7	70.3	---	---	---	---	---	---
1964	28.2	71.3	---	---	---	---	---	---
1965	28.0	72.0	---	---	---	---	---	---
1966	24.7	75.3	---	---	---	---	---	---
1967	23.1	76.9	---	---	---	---	---	---
1969	19.0	81.0	---	---	---	---	---	---
1971	14.8	85.2	---	---	---	---	---	---
1973	10.3	89.7	---	---	---	---	---	---
1975	6.9	93.1	---	---	---	---	---	---
1977	5.3	94.7	42.9	10.0	1.7 5/	7.7 5/	7.6	32.8
1979	3.8	96.2	46.2	10.7	1.5	7.6	6.8	30.2
1981	2.3	97.7	49.7	9.8	1.4	6.8	6.7	29.9
1983	1.8	98.2	50.2	9.8	1.4	6.7	6.8	30.1
1985	1.5	98.5	52.6	9.4	1.2	6.8	7.1	28.5
1987	1.2	98.8	51.2	10.6	1.4	6.7	6.7	28.5
1989	1.0	99.0	53.8	10.4	1.0	6.7	6.7	27.1
1991	1.0	99.0	55.2	10.4	1.0	6.7	6.6	25.8
1993	1.0	99.0	57.3	10.7	1.1	6.6	6.6	23.4

1/ Fluid milk items include plain and flavored whole milk products; plain, fortified, and flavored skim and lowfat milk products; and miscellaneous whole, lowfat and skim milk products.

2/ This breakdown was not available prior to 1977. Percentages may not add to total wholesale due to rounding.

3/ Generally, 11 or more stores (supermarkets, dairy and convenience) nationwide, primarily engaged in food retailing and either under common management, being franchised by a common company, or belonging to a common purchasing association.

4/ Nonchain food stores, nonfood stores (drug stores, gasoline stations, etc.), restaurants, hotels, hospitals, nursing homes, vending machines, and any other type of wholesale outlet.

5/ Does not include data for the New York-New Jersey marketing area for which these data were not available.

TABLE 8--PERCENTAGE OF FLUID MILK ITEMS 1/ DISTRIBUTED BY HANDLERS REGULATED UNDER FEDERAL MILK ORDERS, GROUPED BY REGION, BY METHOD OF DISTRIBUTION, NOVEMBER 1993

Region 2/	Total sales of fluid milk items	Method of distribution														
		Home-delivery	Total wholesale	Chain stores 4/			Type of wholesale outlet 3/									
				Total	Supermarket	Dairy and convenience	Total	Military	Schools	All other 5/						
	Mil. lbs															
North Atlantic	835.8	0.8	99.2	67.3	50.2	17.1	6.5	0.7	5.8	25.5						
Southeast	686.5	R	100.0	75.5	67.1	8.4	8.7	1.9	7.0	15.9						
East North Central	945.1	1.5	98.5	64.8	53.7	11.1	6.1	0.3	5.8	27.6						
West North Central	264.8	1.3	98.7	72.3	62.1	10.2	7.5	0.3	7.2	18.9						
Southwest	521.3	0.3	99.7	67.2	58.3	8.9	11.2	1.7	9.5	21.4						
Mountain	293.3	2.4	97.6	67.9	62.8	5.1	7.1	2.3	4.9	22.6						
Pacific	175.2	0.4	99.6	60.6	54.8	5.8	6.6	1.4	5.2	32.4						
All region total 6/	3,791.7	1.0	99.0	68.0	57.3	10.7	7.6	1.1	6.6	23.4						

R = Restricted. Represents data for fewer than three handlers. "Home-delivery" data are included in "all-other wholesale." "All region totals" include restricted data.
 1/ Fluid milk items include plain and flavored whole milk products; plain, fortified, and flavored skim and lowfat milk products; and miscellaneous whole, lowfat and skim milk products.

2/ See Appendix D for Federal milk order marketing areas included in each region.

3/ Percentages may not add to total wholesale due to rounding.

4/ Generally, 11 or more stores (supermarkets, dairy and convenience) nationwide, primarily engaged in food retailing and either under common management, being franchised by a common company, or belonging to a common purchasing association.

5/ Nonchain food stores, nonfood stores (drug stores, gasoline stations, etc.), restaurants, hotels, hospitals, nursing homes, vending machines, and any other type of wholesale outlet.

6/ Includes those Federal milk order markets for which all the data were restricted. See Appendix D.

TABLE 9--PERCENTAGE OF FLUID MILK ITEMS 1/ DISTRIBUTED BY HANDLERS REGULATED UNDER FEDERAL MILK ORDERS, GROUPED BY REGION, BY TYPE OF CHAIN STORE, NOVEMBER 1993

Region 3/	Type of food chain store 2/					
	Total food chain stores	Supermarket		Dairy/convenience		Total vertically integrated 4/
		Vertically integrated 4/	Other	Vertically integrated 4/	Other	
North Atlantic	67.3	8.6	41.6	6.3	10.8	14.9
Southeast	75.5	34.3	32.8	1.9	6.4	36.2
East North Central	64.8	8.3	45.3	2.4	8.8	10.7
West North Central	72.3	0	62.1	R	10.2	R
Southwest	67.2	24.8	33.5	2.3	6.5	27.1
Mountain	67.9	23.8	39.0	R	5.1	23.8
Pacific	60.6	26.8	28.0	0	5.8	26.8
All Region Total 5/	68.0	16.7	40.6	2.7	8.1	19.4

R = Restricted. Represents data for fewer than three handlers. Data are included in "other." "All Region Totals" include restricted data.

1/ Fluid milk items include plain and flavored whole milk products; plain, fortified, and flavored skim and lowfat milk products; and miscellaneous whole, lowfat, and skim milk products.

2/ Generally, 11 or more stores nationwide, primarily engaged in food retailing and either under common management, being franchised by a common company, or belonging to a common purchasing association.

3/ See Appendix D for the Federal milk order markets included in each region.

4/ Chain stores which have integrated backward into fluid milk processing, or fluid milk processing organizations which have integrated forward into chain store ownership.

5/ Includes those Federal milk order markets for which all of the data were restricted--pertains to fewer than three processing plants. See Appendix D.

TABLE 10--PERCENTAGE OF FLUID MILK ITEMS 1/ DISTRIBUTED BY HANDLERS REGULATED UNDER FEDERAL MILK ORDERS, BY METHOD OF DISTRIBUTION, BY MARKETING AREA, NOVEMBER 1993

Federal milk order marketing area	Method of Distribution													
	Home-delivery	Total wholesale	Type of wholesale outlet 2/			Total	Institutional 4/							
			Supermarkets	Dairy and convenience	Total		Military	Schools	All other 5/					
NORTH ATLANTIC														
New England	1.9	98.1	69.4	49.3	20.1	5.4	0.7			4.7	23.2			
New York-New Jersey	0.4	99.6	63.2	48.6	14.6	6.9	0.1			6.8	29.5			
Middle Atlantic	0.3	99.7	71.7	53.6	18.1	6.9	1.8			5.1	21.1			
SOUTHEAST														
Carolina	6/	100.0	81.3	74.0	7.3	6.4	1.8			4.6	12.3			
Georgia	6/	100.0	76.1	68.2	7.9	12.7	3.0			9.7	11.2			
Alabama-West Florida	6/	100.0	65.9	52.6	13.2	12.9	2.8			10.1	21.2			
Upper Florida	6/	100.0	87.1	87.1	7/	3.7	3.7			8/	9.1			
Tampa Bay	6/	100.0	67.2	55.6	11.6	9.1	9/			9.1	23.7			
Southeastern Florida	6/	100.0	85.9	85.9	7/	6/	6/			6/	14.1			
Tennessee Valley	6/	100.0	61.9	48.7	13.2	10.5	9/			10.5	27.6			
EAST NORTH CENTRAL														
Michigan Upper Peninsula	0.7	99.3	33.1	22.1	11.0	29.6	11.0			18.6	36.6			
Southern Michigan	0.4	99.6	77.1	61.6	15.5	4.6	0			4.6	17.9			
E. Ohio-W. Pennsylvania	2.8	97.2	63.0	49.2	13.9	8.1	9/			8.1	26.1			
Ohio Valley	5.6	94.4	64.3	52.6	11.7	8.2	9/			8.2	21.9			
Indiana	6/	100.0	52.5	50.2	2.3	6.3	9/			6.3	41.3			
Chicago Regional	0.5	99.5	56.5	47.6	8.9	3.6	9/			3.6	39.4			
S. Illinois-E. Missouri	6/	100.0	68.4	54.6	13.8	7.6	0.5			7.1	24.0			
Louis.-Lex.-Evans.	0	100.0	81.2	71.0	10.2	5.8	1.0			4.8	13.0			
WEST NORTH CENTRAL														
Upper Midwest	2.4	97.6	70.0	54.1	16.0	6.6	0.2			6.4	21.0			
Iowa	0.2	99.8	73.6	68.0	5.6	8.9	9/			8.9	17.2			
Nebraska-Western Iowa	6/	100.0	75.7	72.7	3.0	7.7	9/			7.7	16.6			

CONTINUED

TABLE 10--PERCENTAGE OF FLUID MILK ITEMS 1/ DISTRIBUTED BY HANDLERS REGULATED UNDER FEDERAL MILK ORDERS, BY METHOD OF DISTRIBUTION, BY MARKETING AREA, NOVEMBER 1993--CONTINUED

Federal milk order marketing area	Method of Distribution										
	Home-delivery	Total wholesale	Type of wholesale outlet 2/			Institutional 4/					
			Total	Supermarkets	Dairy and convenience	Total	Military	Schools	All other 5/		
	<u>Percent</u>										
WEST SOUTH CENTRAL											
Central Arkansas	6/	100.0	39.5	30.9	8.6	11.5	9/	11.5	49.1		
Southwest Plains	6/	100.0	61.9	49.8	12.1	11.5	3.5	8.0	26.6		
Texas	0.1	99.9	74.8	68.4	6.4	8.2	0.6	7.6	17.0		
Greater Louisiana	6/	100.0	46.8	29.6	17.2	24.0	3.9	20.1	29.2		
New Orleans-Mississippi	6/	100.0	70.9	63.2	7.8	14.9	9/	14.9	14.2		
MOUNTAIN											
Eastern Colorado	8.1	91.9	71.0	65.7	5.4	6.7	2.2	4.5	14.2		
SW. Idaho-E. Oregon	2.9	97.1	68.3	57.6	10.7	9.5	0	9.5	19.4		
Great Basin	6/	100.0	52.7	47.2	5.5	8.0	4.1	3.9	39.3		
Central Arizona	0	100.0	81.4	78.2	3.3	4.5	0.5	4.0	14.0		
New Mexico-West Texas	0	100.0	62.5	56.8	5.7	10.0	3.3	6.7	27.5		
PACIFIC											
Pacific Northwest	0.4	99.6	60.6	54.8	5.8	6.6	1.4	5.2	32.4		
All Market Total 10/	1.0	99.0	68.0	57.3	10.7	7.6	1.1	6.6	23.4		

1/ Fluid milk items include plain and flavored whole milk products; plain, fortified, and flavored skim and lowfat milk products; and miscellaneous whole, lowfat, and skim milk products.

2/ Percentages may not add to total wholesale due to rounding.

3/ Generally, 11 or more stores (supermarket, dairy and convenience) nationwide, primarily engaged in food retailing and either under common management, being franchised by a common company, or belonging to a common purchasing association.

4/ Institutional represents sales made through military installations and public schools, colleges and universities.

5/ All other wholesale represents nonchain food stores, nonfood stores (drug stores, gasoline stations, etc.) restaurants, hotels, hospitals, nursing homes, vending machines, and any other type of wholesale outlet.

6/ Restricted. Represents data for fewer than three handlers. Data are included in all other wholesale.

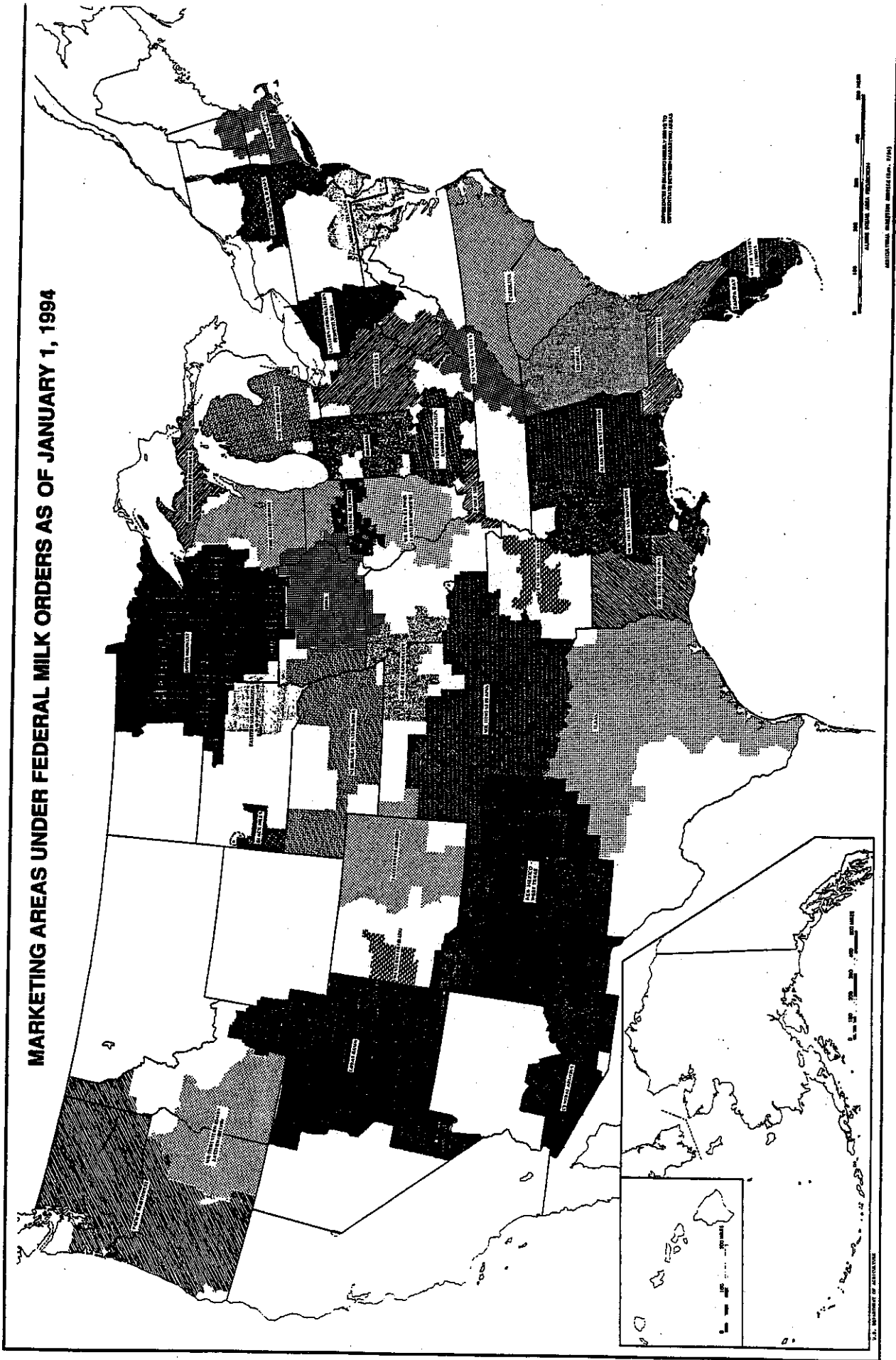
7/ Restricted. Represents data for fewer than three handlers. Data are included in supermarkets.

8/ Restricted. Represents data for fewer than three handlers. Data are included in military.

9/ Restricted. Represents data for fewer than three handlers. Data are included in schools.

10/ Includes the Black Hills, Central Illinois, Eastern South Dakota, Greater Kansas City, Paducah, and Western Colorado marketing areas for which all the data were restricted. Each method total includes restricted data which were not shown for individual marketing areas.

MARKETING AREAS UNDER FEDERAL MILK ORDERS AS OF JANUARY 1, 1994



**APPENDIX B—FLUID MILK PRODUCT SALES, UNITED STATES, 1965,
AND 1970-93**

Year	Fluid whole milk <u>1/</u>	Lowfat milk <u>2/</u>	Total fluid milk products
	Million pounds		
1965	45,829	5,911	51,740
1970	42,507	10,191	52,698
1971	42,330	11,265	53,595
1972	41,511	12,470	53,981
1973	40,022	13,657	53,679
1974	38,205	14,271	52,476
1975	37,554	15,678	53,232
1976	36,716	16,840	53,556
1977	35,482	18,112	53,594
1978	34,594	18,873	53,467
1979	33,716	19,715	53,431
1980	32,328	20,678	53,006
1981	31,240	21,459	52,699
1982	30,060	21,719	51,780
1983	29,620	22,492	52,112
1984	29,111	23,680	52,791
1985	28,642	25,297	53,939
1986	27,297	26,925	54,222
1987	26,451	27,771	54,222
1988	25,230	28,517	53,747
1989	23,510	31,270	54,780
1990	22,024	32,746	54,770
1991	21,523	33,743	55,266
1992	20,994	34,273	55,267
1993 <u>3/</u>	20,327	34,493	54,820

1/ Plain and flavored whole milk.

2/ Lowfat (2 percent and 1 percent) milk, skim milk, flavored milk drinks, and buttermilk.

3/ Preliminary.

SOURCE: Economic Research Service, USDA.

APPENDIX C--CONVERSION FACTORS

Product	Conversion Factors - Pounds Per:								
	Gal.	Half-gal.	Quart	Pint	Half-pint	6 Gal.	5 Gal.		
Whole milk	8.60	4.300	2.1500	1.0750	.5375	51.60	43.00		
Flavored whole milk	8.00	4.000	2.0000	1.0000	.5000	48.00	40.00		
2% milk - plain	8.62	4.310	2.1550	1.0780	.5388	51.72	43.10		
2% milk - added solids	8.66	4.330	2.1650	1.0825	.5412	51.96	43.30		
1% milk - plain	8.62	4.310	2.1550	1.0780	.5388	51.72	43.10		
1% milk - added solids	8.66	4.330	2.1650	1.0825	.5412	51.96	43.30		
Skim milk - plain	8.63	4.315	2.1575	1.0788	.5394	51.78	43.15		
Skim milk - added solids	8.68	4.340	2.1700	1.0850	.5425	52.08	43.40		
Flavored lowfat and skim	8.00	4.000	2.0000	1.0000	.5000	48.00	40.00		
Buttermilk	8.62	4.310	2.1550	1.0780	.5338	51.72	43.10		

APPENDIX D--FEDERAL MILK ORDER MARKETS GROUPED BY REGION

NORTH ATLANTIC

New England
New York-New Jersey
Middle Atlantic

SOUTHEAST

Carolina
Georgia
Alabama-West Florida
Upper Florida
Tampa Bay
Southeastern Florida
Tennessee Valley

EAST NORTH CENTRAL

Michigan Upper Peninsula
Southern Michigan
Eastern Ohio-Western Pennsylvania
Ohio Valley
Indiana
Chicago Regional
Southern Illinois-Eastern Missouri
Louisville-Lexington-Evansville

WEST NORTH CENTRAL

Upper Midwest
Iowa
Nebraska-Western Iowa

SOUTHWEST

Central Arkansas
Southwest Plains
Texas
Greater Louisiana
New Orleans-Mississippi

MOUNTAIN

Eastern Colorado
Southwestern Idaho-Eastern Oregon
Great Basin
Central Arizona
New Mexico-West Texas

PACIFIC

Pacific Northwest

RESTRICTED

Black Hills
Central Illinois
Eastern South Dakota
Greater Kansas City
Paducah
Western Colorado

**APPENDIX E--REPORTED SALES OF MARKET WHOLE MILK AND LOWFAT MILK IN
CALIFORNIA, BY TYPE OF TRADE AND CONTAINER CHARACTERISTICS,
OCTOBER 1993 ^{1/}**

Type of Trade	Sales volume (1,000 Gallons)	Percent of total sales volume
Wholesale	42,028	84.3
Retail	21	<u>2/</u>
Cash-and-Carry	87	0.2
Peddler	7,163	14.4
Federal Government	528	1.0
Total of all types	49,827	100.0

Container Size	Percent of total sales volume by type of container			
	All types	Glass	Paper	Plastic
Bulk	1.5	0	0	1.5
10-quart	<u>2/</u>	0	0	<u>2/</u>
Gallon	65.4	0	0	65.4
One half-gallon	20.7	<u>2/</u>	18.5	2.1
Quart	3.8	<u>2/</u>	3.8	<u>2/</u>
Pint	1.5	0	1.5	0
One-third quart	1.0	0	1.0	0
One-half pint	6.0	0	6.0	0
Other	0.1	0	0.1	0
All sizes combined	100.0	0.1	30.9	69.0

^{1/} SOURCE: "California Dairy Industry Statistics, 1993", California Department of Food and Agriculture, Table 67, page 62.

^{2/} Less than 0.05 percent.

APPENDIX F--ADDITIONAL INFORMATION PUBLISHED IN "FEDERAL MILK ORDER MARKET STATISTICS"

In the July/August 1994 Summary of "Federal Milk Order Statistics" (FMOS-403), there appeared a special article that highlighted some of the more important findings of the 1993 container survey. This article was titled "Fluid Milk Sales by Size and Type of Container and by Method of Distribution." Following are excerpts from this article, including two tables that otherwise do not appear in this report:

(1) The proportion of fluid milk products sold in plastic containers increased, continuing the long-term trend in evidence since this survey was first taken in 1963. The 2 percentage point increase pushed the market share of plastic to 74 percent. Sales of fluid milk in paper containers accounted for 25 percent of total sales, while glass containers accounted for less than one-half of one percent of total sales. (See table 1.)

(2) In all regions of the country, more fluid milk products were sold in plastic containers than in paper and glass combined. Market shares of plastic ranged from 60 percent in the North Atlantic region to over 81 percent in the Southeast region. Glass containers accounted for less than 1 percent of total sales in all regions. (See table 6.)

(3) Plastic containers accounted for more than 75 percent of the sales of whole milk, 2% and 1% lowfat milk, and skim milk. Conversely, about 80 percent or more of the sales of flavored whole milk, flavored lowfat and skim milk, and buttermilk were sold in paper containers. (See page 41.)

(4) The market share of fluid milk products

sold in gallons increased slightly to 64.1 percent. Conversely, the market share of half-gallon containers dropped below 19 percent. About 9.4 percent of total sales were made in half-pint containers--up slightly from the previous survey. Market shares of other container sizes changed marginally from 1991. (See tables 2 and 6.)

(5) In all regions of the country, more fluid milk products were sold in gallon containers than in all other sizes combined. The market share of gallons ranged from 52.3 percent in the North Atlantic region to 71.2 percent in the East North Central region. The proportion of fluid milk products sold in half-pint containers was significantly larger in the Southwest, Southeast, and West North Central regions. In the North Atlantic region, quarts accounted for more than twice the national average. (See table 6.)

(6) Gallon containers accounted for much larger proportions of the sales of whole milk, 2% lowfat milk, 1% lowfat milk, and skim milk. On the other hand, almost two-thirds of the sales of flavored whole milk and more than 77 percent of the sales of flavored lowfat and skim milk were made in pint and half-pint containers. These market shares might be expected as the sales of these flavored milk products are made predominantly through schools and other food service outlets. More buttermilk was sold in half-gallon containers than in other sizes. (See page 41.)

(7) Sales of fluid milk products in gallon sizes were nearly all in plastic containers while sales in quart or smaller sizes were

made predominantly in paper containers. This leads to the conclusion that the importance of a particular size of container in any particular region, or for any particular product, determines the importance of a container type. (See page 42.)

For example, in the North Atlantic region, the proportion of fluid milk products sold in paper containers was significantly higher--39.4 percent compared to the national average of 25.3 percent. (See table C.)

This occurred because the proportion of fluid milk products sold in this region in half-gallon and quart containers--sizes for which paper is the dominant type--was significantly higher. Similarly, both flavored whole milk and flavored lowfat and skim milk had more than 84 percent of their sales in paper containers because over 81 percent of these products were sold in container sizes for which paper is dominant--quart and smaller sizes. (See page 41.)

(8) The container size with the largest change in container type is the half-gallon. While paper is still dominant, the market share of plastic half-gallons increased by 8.8 percentage points to 43.6. This drop in the sales of paper half-gallons is most responsible for the overall drop in the market share of paper. (See page 42.)

(9) The proportion of fluid milk products sold through wholesale outlets remained unchanged. The market share of wholesale in all markets in 1993 was 99.0 percent of total sales; the remaining 1.0 percent was home-delivered. (See table 7.) Although the long-term trend has been an increasing proportion of sales through wholesale outlets, it now appears that the rate of decline in home-delivery may have ended.

In fact, the home-delivery market share has not changed since 1989.

(10) The most important wholesale outlet continues to be food chain stores, which accounted for more than two-thirds of total fluid milk sales. Regionally, the North Atlantic and Mountain regions showed significant increases in the importance of the food chain store category. However, the Pacific region recorded a notable decrease in the market share of this type of outlet. Food chain stores accounted for larger proportions of sales in the Southeast and West North Central regions, and a smaller proportion in the Pacific region.

The market share of supermarket chains--57.3 percent--and the market share of dairy/convenience stores--10.7 percent--increased from 1991. There was significant regional variation in the importance of both supermarket and dairy/convenience chains. (See table 8.)

(11) The market share of vertically integrated food chain stores totaled 19.4 percent, up slightly from the 19.2 percent registered in 1991. Sales by vertically integrated supermarket chains accounted for 16.7 percent of total sales, dairy/convenience store chains 2.7 percent. (See table 9.)

(12) Vertical integration of food chains showed significant regional variation. In the South Atlantic region, more than 36 percent of total fluid milk sales were made by vertically integrated food chains. The comparable proportion in the West North Central region was less than 1 percent. Vertically integrated supermarket chains accounted for 34.3 percent of total sales in the Southeast region, more than 4 times the

market share of these firms in the East North Central region. The market share of vertically integrated dairy/convenience chains in the North Atlantic region was 6.3 percent, well above the national average of 2.7 percent. (See table 9.)

(13) Fluid milk sales through institutional outlets (military and schools) totaled 7.6 percent of total sales, down slightly from 1991. Sales through all other wholesale outlets (nonchain food stores, nonfood stores, restaurants, hospitals, vending machines, etc., combined) accounted for 23.4 percent of total sales, down from 1991. (See table 7.)

APPENDIX F--ADDITIONAL INFORMATION PUBLISHED IN "FEDERAL MILK ORDER STATISTICS"--Continued

PERCENTAGE OF INDIVIDUAL FLUID MILK PRODUCTS DISTRIBUTED BY HANDLERS REGULATED UNDER FEDERAL MILK ORDERS, ALL MARKETS COMBINED ^{1/}, BY SIZE AND TYPE OF CONTAINER, NOVEMBER 1993

Fluid milk product	Total sales in all markets combined	Type of container		
		Glass	Paper	Plastic
	<u>Mil. lbs.</u>	<u>Percent of total sales</u>		
Whole milk	1,239.0	0.2	22.5	77.3
Flavored whole milk	52.5	0.5	86.4	13.1
2% lowfat milk	1,346.8	0.2	17.2	82.6
1% lowfat milk	374.4	0.3	21.6	78.1
Skim milk	498.4	0.4	24.2	75.4
Flavored lowfat and skim milk	173.8	*	84.3	15.7
Buttermilk	56.8	0.1	79.8	20.1
Total fluid milk products	3,791.7	0.2	25.3	74.5

Fluid milk product	Size of container						
	Gallon	Half-gallon	Quart	Pint	Half-pint	5 & 6 gallons	Other
	<u>Percent of total sales</u>						
Whole milk	66.7	18.7	4.3	1.8	6.6	1.6	0.3
Flavored whole milk	0.6	13.9	19.7	42.8	20.3	1.4	1.3
2% lowfat milk	73.0	15.5	1.8	0.2	6.9	2.3	0.3
1% lowfat milk	69.4	20.7	3.2	0.1	5.3	0.8	0.5
Skim milk	63.0	26.2	4.7	*	4.5	1.2	0.4
Flavored lowfat and skim milk	5.3	7.0	4.1	4.9	72.5	1.8	4.4
Buttermilk	7.4	62.0	26.3	1.1	2.0	0.9	0.3
Total fluid milk products	64.1	18.8	3.9	1.5	9.4	1.7	0.6

* Less than one-tenth of one percent.

^{1/} See Appendix D for the Federal milk order markets included.

**APPENDIX F--ADDITIONAL INFORMATION PUBLISHED IN "FEDERAL MILK ORDER
MARKET STATISTICS"--Continued**

**PERCENTAGE OF TOTAL FLUID MILK ITEMS ^{1/} DISTRIBUTED BY HANDLERS
REGULATED UNDER FEDERAL MILK ORDERS, ALL MARKETS COMBINED ^{2/},
BY SIZE OF CONTAINER, BY TYPE OF CONTAINER, NOVEMBER 1993**

Size of container ^{3/}	Total sales of fluid milk items	Type of container		
		Glass	Paper	Plastic
	<u>Mil. lbs.</u>			<u>Percent of Total Sales</u>
Gallon	2,430.1	R	R	99.8
Half-gallon	712.7	0.9	55.5	43.6
Quart	147.7	0.5	96.5	3.0
Pint	57.5	0	96.3	3.7
Half-pint	358.1	R	96.7	3.3
6-gallon	17.5	2.0	0	98.0
5-gallon	47.1	R	0	100.0
All other	21.2	R	75.5	24.1
Total of all sizes	3,791.7	0.2	25.3	74.5

R = Restricted. Pertains to fewer than three processing plants; data are included in totals.

^{1/} Includes plain and flavored whole milk products; plain, fortified, and flavored skim and lowfat milk products; buttermilk; and miscellaneous whole, lowfat, and skim milk products.

^{2/} See Appendix D for the Federal milk order markets included.

^{3/} Six-gallon and five-gallon containers under glass represent metal cans; under plastic, represent mostly bag-in-box containers.