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Packaged Fluid Milk Sales in Federal Milk Order Markets:

By Size and Type of Container
and Distribution Method
During November 1995

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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 1995. Its purpose was to update a similar survey in November 1993, and to see if trends observed in past surveys are continuing. Data were obtained from milk handlers regulated under 32 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 nineteenth report in a series. Similar data have been distributed based on surveys made in November 1963 through 1967, 1969, and every other year through 1993.

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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, paper 63 percent, and plastic about 5 percent of the total. In the most recent survey, almost 76 percent of fluid milk products were sold in plastic containers, 24 percent in paper containers, with less than one-half percent remaining in glass containers.

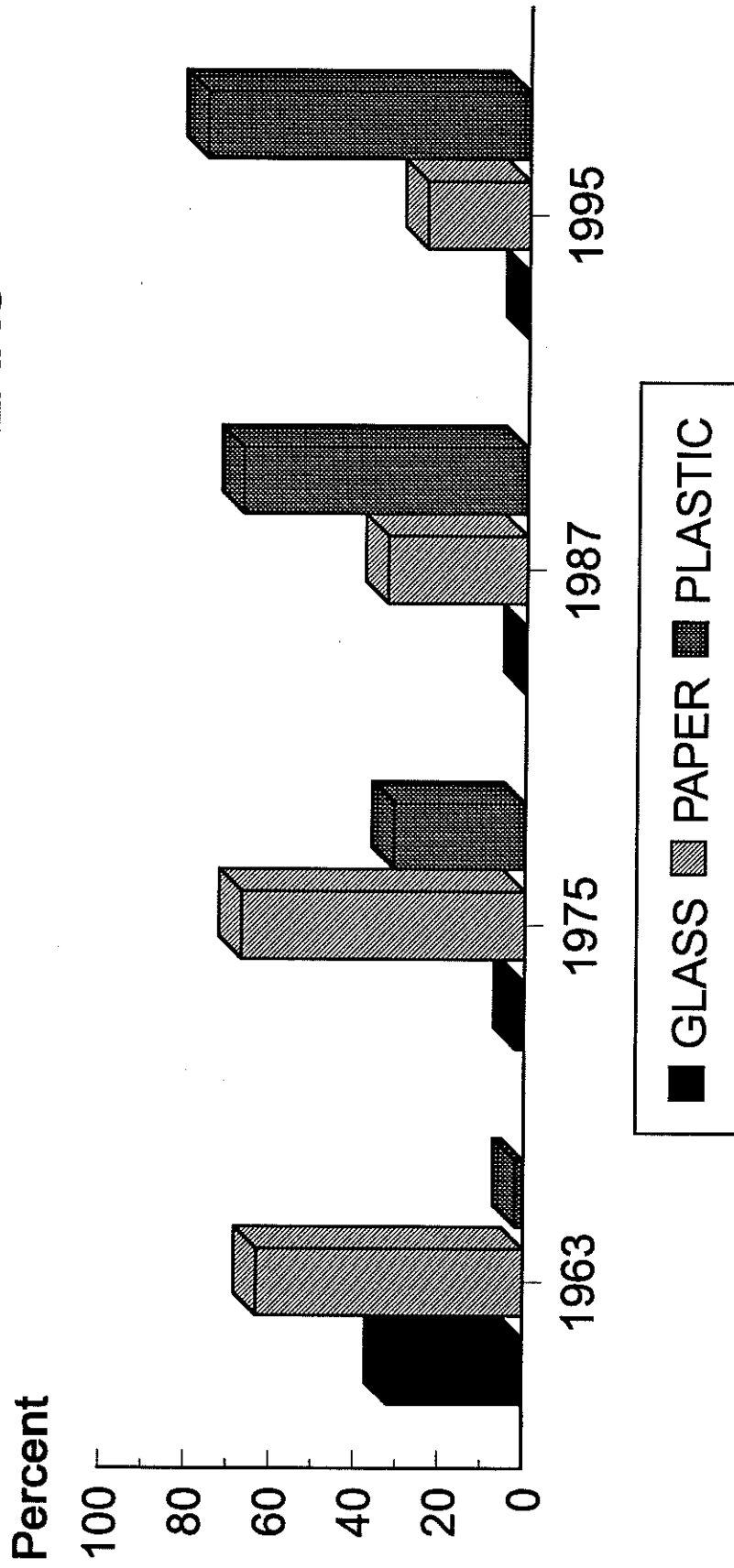
In November 1995, over 64 percent of fluid milk sales were made in gallon containers. This market share has more than doubled since 1971 and is nearly five times greater than the share found in the 1963 survey. This increase has come at the expense of half-gallons for which the market share has dropped from 56 percent of total sales in 1963 to 18 percent in 1995, 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 has decreased with nearly every survey that has been taken. Since the first survey in 1963, the market share has dropped from about 30 percent to less than one percent in the 1995 survey.

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 about 43 percent in 1977. The market share for convenience stores has remained fairly steady, ranging between 9 and 11 percent. The market share of vertically integrated food chain stores peaked at nearly 21 percent in 1981 and generally has decreased since then. The market share for the "all other" category, of which nonchain food stores are the larger proportion, increased to about 25 percent in the 1995 survey, following decreases in market share in each of five previous surveys.

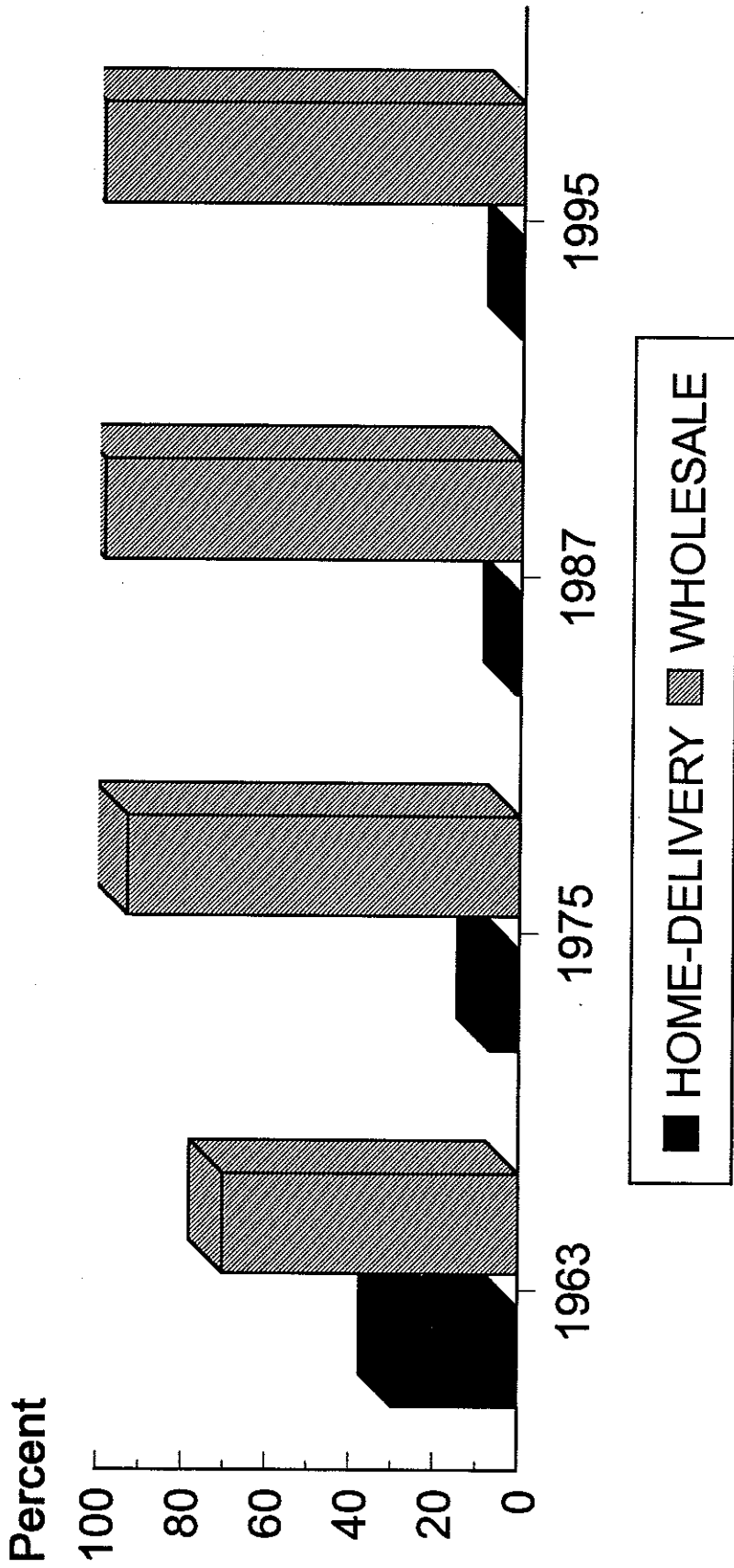
The following charts and tables provide historical information from past surveys and detailed information from the current survey. Information is presented for individual Federal milk order marketing areas, regional groups of these markets, and for all markets combined. Additional information is shown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

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



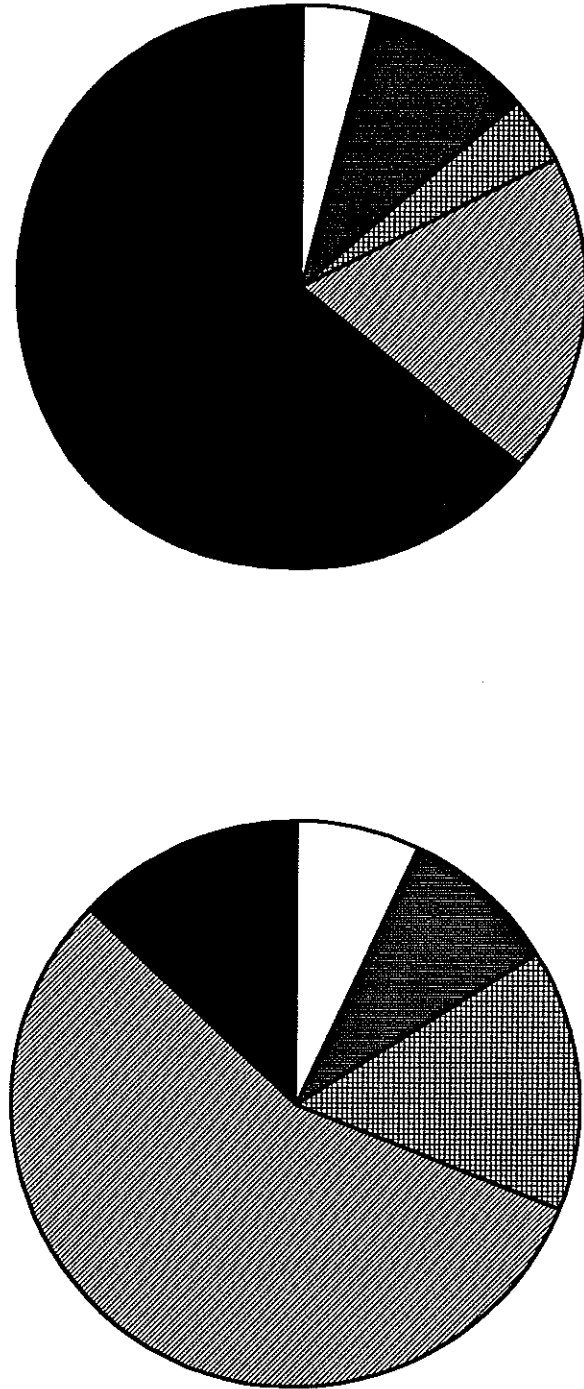
(Data for Chart in Table 1)

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 1995**



GALLON
 HALF-GALLON
 QUART
 HALF-PINT
 OTHER

(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/, 1963-1995

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
1995	*	23	77	*	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
1995	*	25	75	*	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
1995	*	24	76	*	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/, 1963-1995

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
1995	65	18	5	4	7	1	*	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
1995	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
1995	64	18	4	2	10	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 32 FEDERAL MILK ORDERS, NOVEMBER 1995 1/

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
Thousand pounds				
<u>Whole milk items 3/</u>				
Gallon	0	1,684	827,406	829,090
Half-gallon	1,619	103,797	127,435	232,851
Quart	491	60,262	1,950	62,703
Pint	**	42,397	3,209	45,606
Half-pint	0	85,044	1,929	86,974
6-Gallon	73	0	5,509	5,583
5-Gallon	**	0	13,189	13,189
All other sizes	0	2,978	1,141	4,119
Total of all sizes	2,183	296,162	981,769	1,280,122
<u>Lowfat and skim milk items 4/</u>				
Gallon	0	9,425	1,584,413	1,593,838
Half-gallon	5,046	228,481	229,520	463,046
Quart	511	81,251	2,447	84,209
Pint	**	12,088	1,690	13,778
Half-pint	0	268,202	6,566	274,767
6-Gallon	293	0	6,503	6,796
5-Gallon	**	0	34,000	34,000
All other sizes	9	8,948	2,756	11,713
Total of all sizes	5,859	608,394	1,867,894	2,482,155
<u>Total fluid milk items 5/</u>				
Gallon	0	11,109	2,411,819	2,442,928
Half-gallon	6,665	332,278	356,955	695,897
Quart	1,002	141,513	4,397	146,912
Pint	**	54,485	4,898	59,383
Half-pint	0	353,246	8,495	361,741
6-Gallon	366	0	12,012	12,378
5-Gallon	**	0	47,189	47,189
All other sizes	9	11,926	3,898	15,833
Total of all sizes	8,042	904,556	2,849,663	3,762,277

** 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 of "Total of all sizes."

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 cans; 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 1995 1/

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
Thousand pounds				
<u>Carolina</u>				
Gallon	0	**	114,450	114,450
Half-gallon	0	6,428	26,315	32,743
Quart	0	3,903	**	3,903
Pint	0	1,860	0	1,860
Half-pint	0	16,719	39	16,758
6-Gallon	0	0	0	0
5-Gallon	0	0	726	726
All other sizes	0	0	0	0
Total of all sizes	0	28,910	141,530	171,636
<u>Central Arizona</u>				
Gallon	0	0	65,684	65,684
Half-gallon	0	7,685	**	7,685
Quart	0	2,676	0	2,676
Pint	0	1,358	0	1,358
Half-pint	0	6,637	**	6,637
6-Gallon	0	0	1,221	1,221
5-Gallon	0	0	0	0
All other sizes	0	**	**	**
Total of all sizes	0	18,356	66,905	88,037
<u>Chicago Regional</u>				
Gallon	0	**	157,149	157,419
Half-gallon	1,659	3,032	24,071	28,762
Quart	0	5,602	**	5,602
Pint	0	1,393	**	1,393
Half-pint	0	18,017	**	18,017
6-Gallon	0	0	**	**
5-Gallon	0	0	2,918	2,918
All other sizes	0	622	32	654
Total of all sizes	1,659	28,666	184,440	216,066

CONTINUED

TABLE 4--TOTAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS, NOVEMBER 1995 1/-CONTINUED

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
Thousand pounds				
<u>Eastern Colorado</u>				
Gallon	0	0	41,407	41,407
Half-gallon	0	8,831	**	8,831
Quart	0	2,039	**	2,039
Pint	0	879	0	879
Half-pint	0	3,850	0	3,850
6-Gallon	0	0	268	268
5-Gallon	0	0	539	539
All other sizes	0	8	**	8
Total of all sizes	0	15,607	42,214	59,133
<u>Eastern Ohio-Western Pennsylvania</u>				
Gallon	0	0	96,451	96,451
Half-gallon	**	21,331	8,885	30,216
Quart	0	4,797	**	4,797
Pint	0	1,768	**	1,768
Half-pint	0	12,587	0	12,587
6-Gallon	0	0	173	173
5-Gallon	0	0	2,098	2,098
All other sizes	0	740	**	740
Total of all sizes	**	41,223	107,607	149,225
<u>Great Basin</u>				
Gallon	0	0	45,251	45,251
Half-gallon	0	4,978	3,335	8,313
Quart	0	7,102	0	7,102
Pint	0	938	0	938
Half-pint	0	5,914	0	5,914
6-Gallon	0	0	**	**
5-Gallon	0	0	2,021	2,021
All other sizes	0	**	**	**
Total of all sizes	0	18,932	50,607	69,709

CONTINUED

TABLE 4--TOTAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS, NOVEMBER 1995 1/-CONTINUED

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
Thousand pounds				
Indiana				
Gallon	0	**	64,399	64,399
Half-gallon	0	9,173	3,472	12,645
Quart	0	1,742	**	1,742
Pint	0	925	**	925
Half-pint	0	8,972	0	8,972
6-Gallon	0	0	0	0
5-Gallon	0	0	2,233	2,233
All other sizes	0	717	0	717
Total of all sizes	0	21,529	70,104	101,929
Iowa				
Gallon	0	0	56,585	56,585
Half-gallon	0	2,342	7,380	9,722
Quart	0	1,639	0	1,639
Pints	0	565	0	565
Half-pint	0	8,740	0	8,740
6-Gallon	0	0	0	0
5-Gallon	0	0	1,907	1,907
All other sizes	0	**	**	**
Total of all sizes	0	13,286	65,872	79,731
Louisville-Lexington-Evansville				
Gallon	0	0	52,198	52,198
Half-gallon	0	1,684	6,951	8,635
Quart	0	1,020	**	1,020
Pint	0	864	0	864
Half-pint	0	2,994	0	2,994
6-Gallon	0	0	0	0
5-Gallon	0	0	**	**
All other sizes	0	0	0	0
Total of all sizes	0	6,562	59,149	65,910

CONTINUED

TABLE 4--TOTAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS, NOVEMBER 1995 1/-CONTINUED

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
Thousand pounds				
<u>Michigan Upper Peninsula</u>				
Gallon	0	0	2,729	2,729
Half-gallon	0	0	634	634
Quart	0	**	**	**
Pint	0	**	**	**
Half-pint	0	602	0	602
6-Gallon	0	0	0	0
5-Gallon	0	0	**	**
All other sizes	0	0	0	0
Total of all sizes	0	602	3,363	4,212
<u>Middle Atlantic</u>				
Gallon	0	0	124,799	124,799
Half-gallon	699	35,201	14,024	49,924
Quart	**	11,449	254	11,703
Pint	0	4,000	258	4,258
Half-pint	0	19,308	1,149	20,457
6-Gallon	0	0	262	262
5-Gallon	0	0	3,093	3,093
All other sizes	0	891	**	891
Total of all sizes	699	70,849	143,839	215,429
<u>Nebraska-Western Iowa</u>				
Gallon	0	0	35,857	35,857
Half-gallon	0	873	6,738	7,611
Quart	0	1,026	0	1,026
Pint	0	**	0	**
Half-pint	0	4,987	0	4,987
6-Gallon	0	0	**	**
5-Gallon	0	0	1,162	1,162
All other sizes	0	**	**	**
Total of all sizes	0	6,886	43,757	53,683

CONTINUED

TABLE 4--TOTAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS, NOVEMBER 1995 1/-CONTINUED

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
Thousand pounds				
<u>New England</u>				
Gallon	0	0	128,376	128,376
Half-gallon	676	29,128	23,093	52,897
Quart	**	10,035	**	10,035
Pint	0	2,898	1,865	4,763
Half-pint	0	17,932	95	18,027
6-Gallon	366	0	716	1,082
5-Gallon	0	0	3,331	3,331
All other sizes	0	1,523	781	2,304
Total of all sizes	1,042	61,516	158,257	221,139
<u>New Mexico-West Texas</u>				
Gallon	0	0	39,366	39,366
Half-gallon	0	4,906	4,706	9,612
Quart	0	1,518	0	1,518
Pint	0	**	0	**
Half-pint	0	5,569	**	5,569
6-Gallon	0	0	0	0
5-Gallon	0	0	983	983
All other sizes	0	0	0	0
Total of all sizes	0	11,993	45,055	59,195
<u>New York-New Jersey</u>				
Gallon	0	0	169,910	169,910
Half-gallon	1,981	84,311	25,753	112,045
Quart	540	37,021	1,089	38,650
Pint	**	6,223	379	6,602
Half-pint	**	28,473	949	29,422
6-Gallon	0	0	4,515	4,515
5-Gallon	0	0	2,217	2,217
All other sizes	4	1,627	34	1,665
Total of all sizes	2,525	157,655	204,846	365,037

CONTINUED

TABLE 4--TOTAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS, NOVEMBER 1995 1/-CONTINUED

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
Thousand pounds				
<u>Ohio Valley</u>				
Gallon	0	**	103,403	103,403
Half-gallon	0	5,531	10,576	16,107
Quart	0	2,528	**	2,528
Pint	0	2,416	**	2,416
Half-pint	0	13,208	**	13,208
6-Gallon	0	0	**	**
5-Gallon	0	0	1,617	1,617
All other sizes	0	319	**	319
Total of all sizes	0	24,002	115,596	140,235
<u>Pacific Northwest</u>				
Gallon	0	0	123,127	123,127
Half-gallon	0	29,353	1,259	30,612
Quart	0	6,597	0	6,597
Pint	0	2,406	0	2,406
Half-pint	0	9,735	0	9,735
6-Gallon	0	0	1,390	1,390
5-Gallon	0	0	1,292	1,292
All other sizes	0	363	1,356	1,719
Total of all sizes	0	48,454	128,424	176,878
<u>Southeast</u>				
Gallon	0	0	235,222	235,222
Half-gallon	0	13,304	49,673	62,977
Quart	0	8,952	1,202	10,154
Pint	0	7,523	**	7,523
Half-pint	0	45,677	2,736	48,413
6-Gallon	0	0	**	**
5-Gallon	0	0	3,395	3,395
All other sizes	0	75	207	282
Total of all sizes	0	75,531	292,435	368,021

CONTINUED

TABLE 4--TOTAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS, NOVEMBER 1995 1/-CONTINUED

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
	Thousand pounds			
	Southeastern Florida			
Gallon	0	0	48,344	48,344
Half-gallon	0	2,217	17,240	19,457
Quart	0	2,318	**	2,318
Pint	0	1,214	0	1,214
Half-pint	0	8,882	0	8,882
6-Gallon	0	0	**	**
5-Gallon	0	0	479	479
All other sizes	0	0	0	0
Total of all sizes	0	14,631	66,063	81,224
	Southern Illinois-Eastern Missouri			
Gallon	0	0	70,171	70,171
Half-gallon	1,000	3,994	5,692	10,686
Quart	**	1,983	**	1,983
Pint	0	1,052	0	1,052
Half-pint	0	11,936	0	11,936
6-Gallon	0	0	**	**
5-Gallon	0	0	3,259	3,259
All other sizes	0	1,614	**	1,614
Total of all sizes	1,000	20,579	79,122	100,863
	Southern Michigan			
Gallon	0	**	117,747	117,747
Half-gallon	**	5,967	17,307	23,274
Quart	**	10,225	**	10,225
Pint	0	2,598	**	2,598
Half-pint	0	15,671	0	15,671
6-Gallon	0	0	0	0
5-Gallon	0	0	1,888	1,888
All other sizes	0	216	**	216
Total of all sizes	**	34,677	136,942	172,153

CONTINUED

TABLE 4--TOTAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS, NOVEMBER 1995 1/-CONTINUED

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
Thousand pounds				
<u>Southwest Plains</u>				
Gallon	0	0	87,266	87,266
Half-gallon	0	2,089	19,305	21,394
Quart	0	2,157	0	2,157
Pint	0	1,981	0	1,981
Half-pint	0	12,417	0	12,417
6-Gallon	0	0	0	0
5-Gallon	0	0	1,673	1,673
All other sizes	0	**	**	**
Total of all sizes	0	18,644	108,244	127,131
<u>Southwestern Idaho-Eastern Oregon</u>				
Gallon	**	0	9,292	9,292
Half-gallon	**	**	191	191
Quart	**	**	0	**
Pint	0	529	0	529
Half-pint	0	**	0	**
6-Gallon	0	0	**	**
5-Gallon	0	0	**	**
All other sizes	0	**	**	**
Total of all sizes	**	529	9,483	14,461
<u>Tampa Bay</u>				
Gallon	0	0	67,950	67,950
Half-gallon	0	1,744	21,155	22,899
Quart	0	2,226	**	2,226
Pint	0	1,479	**	1,479
Half-pint	0	9,751	**	9,751
6-Gallon	0	0	**	**
5-Gallon	0	0	**	**
All other sizes	0	**	**	**
Total of all sizes	0	15,200	89,105	105,050

CONTINUED

TABLE 4--TOTAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS, NOVEMBER 1995 1/-CONTINUED

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
	Thousand pounds			
	<u>Tennessee Valley</u>			
Gallon	0	0	58,316	58,316
Half-gallon	0	1,240	12,082	13,322
Quart	0	1,682	**	1,682
Pint	0	1,804	1,663	3,467
Half-pint	0	14,040	0	14,040
6-Gallon	0	0	0	0
5-Gallon	0	0	1,226	1,226
All other sizes	0	0	**	**
Total of all sizes	0	18,766	73,287	92,248
	<u>Texas</u>			
Gallon	0	0	173,966	173,966
Half-gallon	0	9,018	29,620	38,638
Quart	0	5,074	**	5,074
Pint	0	4,358	**	4,358
Half-pint	0	27,855	**	27,855
6-Gallon	0	0	0	0
5-Gallon	0	0	2,561	2,561
All other sizes	0	0	432	432
Total of all sizes	0	46,305	206,579	253,966
	<u>Upper Florida</u>			
Gallon	0	0	16,246	16,246
Half-gallon	**	**	2,544	2,544
Quart	0	1,015	0	1,015
Pint	0	442	0	442
Half-pint	0	2,001	0	2,001
6-Gallon	0	0	0	0
5-Gallon	0	0	0	0
All other sizes	0	**	0	**
Total of all sizes	**	3,458	18,790	24,377

CONTINUED

TABLE 4--TOTAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS, NOVEMBER 1995 1/-CONTINUED

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
Thousand pounds				
<u>Upper Midwest</u>				
Gallon	0	0	67,811	67,811
Half-gallon	**	29,575	7,924	37,499
Quart	0	3,235	0	3,235
Pint	0	914	0	914
Half-pint	0	12,793	**	12,793
6-Gallon	0	0	**	**
5-Gallon	**	0	4,077	4,081
All other sizes	**	1,396	279	1,680
Total of all sizes	**	47,913	80,091	128,676

**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 the total of "Total of all 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 32 FEDERAL MILK ORDERS, NOVEMBER 1995 1/**

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
Thousand pounds				
<u>Whole milk</u>				
Gallon	0	1,684	826,332	828,017
Half-gallon	1,461	99,504	122,104	223,069
Quart	378	49,712	1,296	51,387
Pint	**	19,759	1,975	21,734
Half-pint	0	77,159	1,393	78,552
6-Gallon	73	0	5,375	5,448
5-Gallon	**	0	12,682	12,682
All other sizes	0	2,342	1,131	3,473
Total of all sizes	1,913	250,161	972,288	1,224,365
<u>Flavored whole milk products</u>				
Gallon	0	0	1,074	1,074
Half-gallon	158	4,293	5,331	9,782
Quart	113	10,550	653	11,316
Pint	**	22,638	1,234	23,872
Half-pint	0	7,885	536	8,422
6-Gallon	0	0	134	134
5-Gallon	**	0	507	507
All other sizes	0	636	11	647
Total of all sizes	271	46,001	9,480	55,757
<u>2% lowfat milk - plain</u>				
Gallon	0	5,184	877,684	882,868
Half-gallon	1,946	81,435	96,601	179,982
Quart	**	26,523	635	27,157
Pint	0	2,937	127	3,064
Half-pint	0	85,655	599	86,254
6-Gallon	**	0	4,973	4,973
5-Gallon	0	0	23,423	23,423
All other sizes	**	2,951	2,069	5,020
Total of all sizes	1,946	204,684	1,006,112	1,213,017

CONTINUED

TABLE 5--INDIVIDUAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS UNDER 32 FEDERAL MILK ORDERS, NOVEMBER 1995 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	35,082	35,082
Half-gallon	0	2,987	8,609	11,597
Quart	**	837	**	837
Pint	0	13	4	17
Half-pint	0	1,299	0	1,299
6-Gallon	0	0	**	**
5-Gallon	0	0	48	48
All other sizes	0	**	**	**
Total of all sizes	**	5,136	43,743	48,985
<u>1% lowfat milk - plain</u>				
Gallon	0	695	252,836	253,531
Half-gallon	1,081	40,827	28,299	70,207
Quart	**	9,793	165	9,958
Pint	0	216	46	262
Half-pint	0	23,979	1,039	25,018
6-Gallon	0	0	323	323
5-Gallon	**	0	1,691	1,691
All other sizes	0	2,848	91	2,939
Total of all sizes	1,081	78,357	284,488	364,003
<u>1% lowfat milk - milk solids added</u>				
Gallon	0	0	17,576	17,576
Half-gallon	0	2,406	5,657	8,063
Quart	0	946	0	946
Pint	0	**	0	**
Half-pint	0	836	**	836
6-Gallon	0	0	**	**
5-Gallon	0	0	**	**
All other sizes	0	522	**	522
Total of all sizes	0	4,709	23,233	28,050

CONTINUED

TABLE 5--INDIVIDUAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS UNDER 32 FEDERAL MILK ORDERS, NOVEMBER 1995 1/--CONTINUED

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
	Thousand pounds			
	Skim milk - plain			
Gallon	0	3,129	356,811	359,940
Half-gallon	1,907	61,737	64,646	128,290
Quart	263	20,857	508	21,628
Pint	**	1,414	**	1,414
Half-pint	0	21,219	58	21,277
6-Gallon	33	0	824	857
5-Gallon	**	0	5,497	5,497
All other sizes	**	1,618	71	1,689
Total of all sizes	2,203	109,975	428,416	540,616
	Skim milk - milk solids added			
Gallon	0	0	29,086	29,086
Half-gallon	**	5,663	11,271	16,934
Quart	**	2,485	**	2,485
Pint	0	**	**	**
Half-pint	0	2,755	**	2,755
6-Gallon	0	0	**	**
5-Gallon	0	0	**	**
All other sizes	0	29	47	76
Total of all sizes	**	10,932	40,404	51,692
	Flavored lowfat and skim milk products			
Gallon	0	**	11,612	11,612
Half-gallon	66	7,141	7,175	14,382
Quart	**	6,958	428	7,387
Pint	**	6,631	1,496	8,127
Half-pint	0	131,395	4,823	136,217
6-Gallon	**	0	265	265
5-Gallon	**	0	2,655	2,655
All other sizes	0	971	239	1,210
Total of all sizes	66	153,096	28,693	182,048

CONTINUED

TABLE 5--INDIVIDUAL FLUID MILK ITEMS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS UNDER 32 FEDERAL MILK ORDERS, NOVEMBER 1995 1/--CONTINUED

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
	Thousand pounds			
	Buttermilk			
Gallon	0	**	3,725	3,725
Half-gallon	**	26,284	7,263	33,548
Quart	**	12,853	668	13,522
Pint	0	803	0	803
Half-pint	0	1,064	0	1,064
6-Gallon	0	0	90	90
5-Gallon	0	0	415	415
All other sizes	0	**	211	211
Total of all sizes	**	41,006	12,373	53,744

** 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 total of "Total of all 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 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 1995

Region 2/	Total sales of fluid milk items	Type of Container		
		Glass 3/	Paper	Plastic
	<u>Mil. lbs.</u>		<u>Percent of total sales</u>	
North Atlantic	801.6	0.6	36.2	63.2
Southeastern	842.6	*	18.9	81.1
East North Central	950.6	0.3	19.8	79.9
West North Central	262.1	*	26.4	73.6
Southwest	381.1	0	17.1	82.9
Mountain	290.5	*	24.5	75.5
Pacific	176.9	0	27.4	72.6
Total 4/	3,762.3	0.2	24.0	75.7

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	52.8	26.8	7.6	2.0	8.5	1.8	0.6
Southeastern	64.3	18.5	2.6	1.9	11.9	0.8	0.1
East North Central	71.0	13.8	3.1	1.2	8.9	1.5	0.5
West North Central	61.1	21.0	2.3	0.7	10.2	3.7	0.9
Southwest	68.5	15.8	2.0	1.7	10.7	1.1	0.2
Mountain	69.2	13.8	4.8	1.6	8.5	1.8	0.3
Pacific	69.6	17.3	3.7	1.4	5.5	1.5	1.0
Total 4/	64.4	18.5	3.9	1.6	9.6	1.6	0.4

*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 1995

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 of total sales								
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	7.6	30.2
1981	2.3	97.7	49.7	9.8	1.4	6.8	6.8	29.9
1983	1.8	98.2	50.2	9.8	1.4	6.7	6.7	30.1
1985	1.5	98.5	52.6	9.4	1.2	6.8	6.8	28.5
1987	1.2	98.8	51.2	10.6	1.4	7.1	7.1	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	6.7	25.8
1993	1.0	99.0	57.3	10.7	1.1	6.6	6.6	23.4
1995	0.7	99.3	56.5	10.2	1.0	6.5	6.5	25.1

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 1995

Region 2/	Total sales of fluid milk items	Method of distribution									
		Home-delivery	Total wholesale	Type of wholesale outlet 3/						All other 5/	
				Chain stores 4/		Institutional		Total	Schools		
				Total	Supermarket	Dairy and convenience	Military				
Percent of total sales											
	Mil. lbs										
North Atlantic	801.6	0.6	99.4	65.6	50.9	14.7	6.1	0.9	5.2	27.7	
Southeastern	842.6	0.4	99.6	67.9	59.0	8.9	9.3	1.3	8.0	22.4	
East North Central	950.6	0.7	99.3	65.4	54.7	10.8	6.5	0.4	6.1	27.4	
West North Central	262.1	1.3	98.7	71.0	61.3	9.7	7.8	0.4	7.4	19.8	
Southwest	381.1	R	100.0	67.1	59.5	7.6	9.3	1.0	8.2	23.6	
Mountain	290.5	2.2	97.8	67.2	60.2	7.0	6.9	2.3	4.7	23.6	
Pacific	176.9	0.4	99.6	66.3	59.8	6.5	5.3	1.3	4.1	27.9	
All region total 6/	3,762.3	0.7	99.3	66.7	56.5	10.2	7.4	1.0	6.5	25.1	

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 1995

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	
	<u>Percent of total sales</u>					
North Atlantic	65.6	7.7	43.2	5.7	9.0	13.4
Southeastern	67.9	27.8	31.2	1.1	7.8	28.9
East North Central	65.4	8.4	46.3	1.4	9.4	9.8
West North Central	71.0	0	61.3	R	9.7	R
Southwest	67.1	30.9	28.7	R	4.5	30.9
Mountain	67.2	25.0	35.2	R	6.7	25.0
Pacific	66.3	28.7	31.1	0	6.5	28.7
All Region Total 5/	66.7	16.4	40.1	2.2	8.1	18.6

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 1995

Federal milk order marketing area	Method of Distribution										
	Home-delivery	Total wholesale	Type of wholesale outlet 2/							All other 5/	
			Food chain stores 3/		Dairy and convenience	Institutional 4/		Schools			
			Total	Supermarkets		Total	Military				
Percent											
NORTH ATLANTIC											
New England	1.3	98.7	69.1	50.8	18.3	4.7	0.6	4.1	25.0		
New York-New Jersey	0.4	99.6	55.0	47.3	7.8	5.6	0.5	5.1	38.9		
Middle Atlantic	0.3	99.7	80.0	57.2	22.7	8.3	1.9	6.4	11.4		
SOUTHEASTERN											
Carolina	0	100.0	76.3	70.0	6.4	9.0	1.9	7.1	14.6		
Tennessee Valley	0	100.0	56.3	42.7	13.6	11.9	6/	11.9	31.8		
Southeast	0.6	99.4	60.0	49.7	10.3	10.6	1.5	9.1	28.9		
Upper Florida	7/	100.0	84.6	84.6	8/	7/	7/	7/	15.4		
Tampa Bay	7/	100.0	76.7	76.7	8/	5.5	6/	5.5	17.8		
Southeastern Florida	7/	100.0	82.4	82.4	0	7/	7/	7/	17.6		
EAST NORTH CENTRAL											
Michigan Upper Peninsula	7/	100.0	7/	7/	7/	29.5	6/	29.5	70.5		
Southern Michigan	0.3	99.7	80.9	64.0	16.9	7.8	6/	7.8	11.0		
E. Ohio-W. Pennsylvania	0.8	99.2	63.6	51.0	12.6	6.3	6/	6.3	29.3		
Ohio Valley	7/	100.0	63.6	53.4	10.2	9.2	6/	9.2	27.2		
Indiana	7/	100.0	53.8	51.7	2.1	6.0	6/	6.0	40.1		
Chicago Regional	0.5	99.5	60.1	52.2	7.9	3.0	6/	3.0	36.4		
S. Illinois-E. Missouri	7/	100.0	52.0	46.4	5.6	9.7	1.4	8.3	38.3		
Louis.-Lex.-Evans.	7/	100.0	90.7	68.2	22.6	3.8	6/	3.8	5.5		
WEST NORTH CENTRAL											
Upper Midwest	2.6	97.4	69.0	53.6	15.4	7.9	0.3	7.6	20.5		
Iowa	7/	99.8	73.2	67.6	5.6	8.4	6/	8.4	18.4		
Nebraska-Western Iowa	7/	100.0	72.8	70.5	2.3	6.6	6/	6/	20.5		

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 1995--CONTINUED

Federal milk order marketing area	Method of Distribution										
	Home-delivery	Total wholesale	Type of wholesale outlet 2/							All other 5/	
			Food chain stores 3/		Dairy and convenience		Institutional 4/				
			Total	Supermarkets	Total	convenience	Total	Military	Schools		
Percent											
SOUTHWEST											
Southwest Plains	7/	100.0	62.9	52.8	10.1	8.1	0.7	7.4	29.0		
Texas	7/	100.0	69.3	62.9	6.4	9.9	1.2	8.7	20.8		
MOUNTAIN											
Eastern Colorado	8.0	92.0	70.8	65.4	5.5	6.8	2.2	4.6	14.3		
SW. Idaho-E. Oregon	0.3	99.7	72.9	65.8	7.1	6.2	0	6.2	20.6		
Great Basin	7/	100.0	59.0	53.1	5.9	6.6	2.8	3.9	34.4		
Central Arizona	7/	100.0	78.7	70.6	8.2	4.9	1.6	3.4	16.3		
New Mexico-West Texas	7/	100.0	54.8	46.6	8.1	10.5	3.3	7.2	34.8		
PACIFIC											
Pacific Northwest	0.4	99.6	66.3	59.8	6.5	5.3	1.3	4.1	27.9		
All Market Total 9/	0.7	99.3	66.7	56.5	10.2	7.4	1.0	6.5	25.1		

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 schools.

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

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

9/ Includes the Black Hills, Central Illinois, Eastern South Dakota, Greater Kansas City, 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.

**APPENDIX B--FLUID MILK PRODUCT SALES, UNITED STATES, 1965, 1970,
AND 1975-95**

Year	Fluid whole milk 1/	Lowfat milk 2/	Total fluid milk products
	Million pounds		
1965	45,829	5,911	51,740
1970	42,507	10,191	52,698
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	22,040	32,768	54,808
1991	21,522	33,740	55,262
1992	20,955	34,249	55,204
1993	20,228	34,357	54,585
1994	20,035	34,944	54,979
1995	19,478	35,402	54,880

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

SOUTHEASTERN

Carolina
Tennessee Valley
Southeast
Upper Florida
Tampa Bay
Southeastern Florida

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

Southwest Plains
Texas

MOUNTAIN

Eastern Colorado
SW. Idaho-E. Oregon
Great Basin
Central Arizona
New Mexico-W. Texas

PACIFIC

Pacific Northwest

RESTRICTED

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

APPENDIX E--REPORTED SALES OF MARKET WHOLE MILK AND LOWFAT MILK IN CALIFORNIA, BY TYPE OF TRADE AND CONTAINER CHARACTERISTICS, OCTOBER 1995 1/

Type of Trade	Sales volume (1,000 Gallons)	Percent of total sales volume
Wholesale	46,177	89.4
Retail	109	0.2
Cash-and-Carry	142	0.3
Peddler	4,822	9.3
Federal Government	413	0.8
Total of all types	51,622	100.0

Container Size	Percent of total sales volume by type of container			
	All types	Glass	Paper	Plastic
Bulk	2.6	0	0	2.6
10-quart	2/	0	0	2/
Gallon	65.4	0	0	65.4
Half-gallon	18.8	2/	15.5	3.2
Quart	3.7	2/	3.7	2/
Pint	1.8	0	1.8	0
One-third quart	0.9	0	0.9	0
Half pint	6.2	0	6.2	0
Other	0.6	0	0.6	0
All sizes combined	100.0	0.1	28.7	71.2

1/ SOURCE: "California Dairy Industry Statistics, 1995", 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 November/December 1996 Summary of "Federal Milk Order Statistics" (FMOS-417), there appeared a special article that highlighted some of the more important findings of the 1995 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 76 percent. Sales of fluid milk in paper containers accounted for 24 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 about 63 percent in the North Atlantic region to almost 83 percent in the Southwest 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 79 percent of the sales of whole milk, 2% and 1% lowfat milk, and skim milk. Conversely, about 77 percent or more of the sales of flavored whole milk, flavored lowfat and skim milk, and buttermilk were sold in paper containers. (See page 40.)
- (4) The market share of fluid milk products sold in gallons increased slightly to 64.4 percent. Conversely, the market share of half-gallon containers dropped to 18.5 percent. About 9.6 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 52.8 percent in the North Atlantic region to 71.0 percent in the East North Central region. The proportion of fluid milk products sold in half-pint containers was significantly larger in the Southeastern, Southwest, and West North Central regions. In the North Atlantic region, quarts accounted for nearly 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 58 percent of the sales of flavored whole milk and more than 79 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 40.)
- (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 41.)

For example, in the North Atlantic region, the proportion of fluid milk products sold in paper containers was significantly higher--36.2 percent compared to the national average of 24.0 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 has a prominent type--was significantly higher. (See table 6 and page 41.) Similarly, both flavored whole milk and flavored lowfat and skim milk had more than 82 percent of their sales in paper containers because over 78 percent of these products were sold in container sizes for which paper is dominant--quart and smaller sizes. (See pages 40 and 41.)

(8) For the first time ever, there were more sales of fluid milk in plastic half-gallon containers than in paper half-gallon containers. The market share of plastic half-gallon increased by 7.7 percentage points to 51.3. This drop in the sales of paper half-gallons was most responsible for the overall drop in the market share of paper. (See page 41.)

(9) The proportion of fluid milk products sold through wholesale outlets increased slightly. The market share of wholesale in all markets in 1995 was 99.3 percent of total sales; the remaining 0.7 percent was home-delivered. (See table 7.) The long-term trend of an increasing proportion of sales

through wholesale outlets has reestablished itself, after holding steady over the previous three surveys.

(10) The most important wholesale outlet continues to be food chain stores, which accounted for two-thirds of total fluid milk sales. Regionally, the Pacific region showed a significant increase in the importance of the food chain store category. Food chain stores had similar proportions of sales across most regions, and a larger proportion in the West North Central region.

The market share of supermarket chains--56.5 percent--and the market share of dairy/convenience stores--10.2 percent--decreased from 1993. 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 18.6 percent, down from the 19.4 percent registered in 1993. Sales by vertically integrated supermarket chains accounted for 16.4 percent of total sales, while dairy/convenience store chains accounted for 2.2 percent. (See table 9.)

(12) Vertical integration of food chains showed significant regional variation. In the Southwest region, more than 30 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 30.9 percent of total sales in the Southwest region, more than 4 times the market share of these firms in the North Atlantic region. The market share of vertically integrated dairy/convenience chains in the North

Atlantic region was 5.7 percent, well above the national average of 2.2 percent. (See table 9.)

(13) Fluid milk sales through institutional outlets (military and schools) totaled 7.4

percent of total sales, down slightly from 1993. Sales through all other wholesale outlets (nonchain food stores, nonfood stores, restaurants, hospitals, vending machines, etc., combined) accounted for 25.1 percent of total sales, up from 1993. (See table 7.)

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 1995

Fluid milk product	Total sales in all markets combined Mil. lbs.	Type of container		
		Glass	Paper	Plastic
		Percent of total sales		
Whole milk	1,224.4	0.2	20.4	79.4
Flavored whole milk	55.8	0.5	82.5	17.0
2% lowfat milk	1,262.0	0.2	16.6	83.2
1% lowfat milk	392.1	0.3	21.2	78.5
Skim milk	592.3	0.4	20.4	79.2
Flavored lowfat and skim milk	182.0	*	84.1	15.8
Buttermilk	53.7	*	76.9	23.0
Total fluid milk products	3,762.3	0.2	24.0	75.7

Fluid milk product	Size of container					
	Gallon	Half-gallon	Quart	Pint	Half-pint	Other
	Percent of total sales					
Whole milk	67.6	18.2	4.2	1.8	6.4	0.3
Flavored whole milk	1.9	17.5	20.3	42.8	15.1	1.2
2% lowfat milk	72.7	15.2	2.2	0.2	6.9	0.4
1% lowfat milk	69.2	20.0	2.8	0.1	6.6	0.9
Skim milk	65.7	24.5	4.1	0.2	4.1	0.3
Flavored lowfat and skim milk	6.4	7.9	4.1	4.5	74.8	0.7
Buttermilk	7.5	62.5	25.2	1.5	2.0	0.4
Total fluid milk products	64.4	18.5	3.9	1.6	9.6	0.4

* 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 1995

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	2,422.9	0	0.5	99.5
Half-gallon	695.9	1.0	47.7	51.3
Quart	146.9	0.7	96.3	3.0
Pint	59.4	R	91.8	8.2
Half-pint	361.7	0	97.7	2.3
6-gallon	12.4	3.0	0	97.0
5-gallon	47.2	R	0	100.0
All other	15.8	0.1	75.3	24.6
Total of all sizes	3,762.3	0.2	24.0	75.7

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.

