



United States
Department of
Agriculture

Marketing and
Regulatory
Programs

Agricultural
Marketing
Service

Dairy Programs

Packaged Fluid Milk Sales in Federal Milk Order Markets:

**By Size and Type of Container
and Distribution Method
During November 1997**

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 1997. Its purpose was to update a similar survey in November 1995, and to see if trends observed in past surveys are continuing. Data were obtained from milk handlers regulated under 31 marketing orders.

The charts and tables in this report 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.

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 twentieth report in a series. Similar data have been distributed based on surveys made in November 1963 through 1967, 1969, and every other year through 1995.

Previous issues of this report contained similar information collected for fluid milk sales in California. However, this data series has been discontinued.

Issued May 1999

TABLE OF CONTENTS

	<u>Page No.</u>
Preface.....	1
Table of Contents.....	2
Introduction and definitions.....	4
Historical Perspective.....	5
Chart 1: Fluid milk sales by type of container, November of selected years.....	6
Chart 2: Fluid milk sales by method of distribution, November of selected years.....	7
Chart 3: Fluid milk sales by size of container, November 1963 and 1997.....	8
Table 1: Percentage of whole milk products, fat-reduced milk products, and total fluid milk products, sold by type of containers, by handlers regulated under Federal milk orders, November of selected years.....	9
Table 2: Percentage of whole milk products, fat-reduced milk products, and total fluid milk products, sold by size of container, by handlers regulated under Federal milk orders, November of selected years.....	10
Table 3: Summary of fluid milk sales by size and type of containers, by handlers regulated under 31 Federal milk orders, November 1997.....	11
Table 4: Total fluid milk products sold in various sizes and types of containers by handlers regulated under selected Federal milk orders, November 1997.....	12
Table 5: Individual fluid milk products sold in various sizes and types of containers by handlers regulated under 31 Federal milk orders, November 1997.....	21
Table 6: Percentage of total fluid milk products distributed by handlers regulated under Federal milk orders, grouped by region, by type and size of container, November 1997.....	25
Table 7: Percentage of fluid milk products distributed by handlers regulated under Federal milk orders, by method of distribution and type of wholesale outlet, November of selected years, 1963 to 1997.....	26
Table 8: Percentage of fluid milk products distributed by handlers regulated under Federal milk orders, grouped by region, by method of distribution, November 1997.....	27
Table 9: Percentage of fluid milk products distributed by handlers regulated under Federal milk orders, grouped by region, by type of chain store, November 1997.....	28

TABLE OF CONTENTS--Continued

Table 10: Percentage of fluid milk products distributed by handlers regulated under Federal milk orders, by method of distribution, by marketing area, November 1997.....	29
Appendix A: Map of marketing areas under Federal orders as of October 1, 1997.....	31
Appendix B: Fluid milk product sales, United States, 1965, 1970, 1975, and 1980-95.....	32
Appendix C: Conversion factors.....	33
Appendix D: Federal milk order markets grouped by region.....	34
Appendix E: Additional information published in "Federal Milk Order Market Statistics.....	35

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.

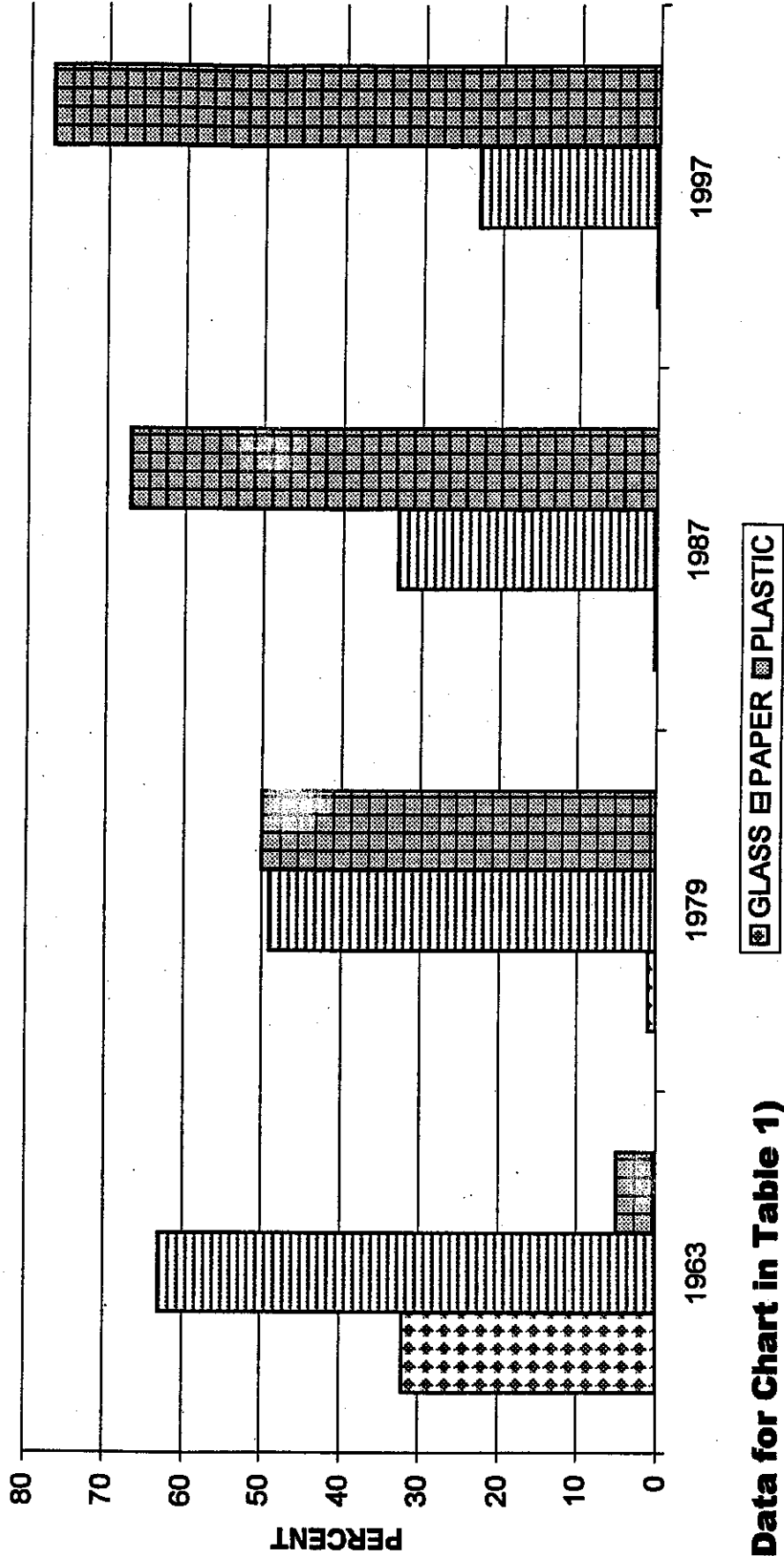
In the first survey taken in 1963, sales of fluid milk products in glass containers accounted for about 32 percent, paper 63 percent, and plastic about 5 percent of the total. In the most recent survey, 79 percent of fluid milk products were sold in plastic containers, 21 percent in paper containers, with less than one-half percent remaining in glass containers. The single-serve, resealable, milk bottle shaped containers were becoming more widely available as the current survey was being conducted. Information collected on this container is incomplete and its full impact on fluid milk sales will have to be observed in future surveys.

In November 1997, nearly 66 percent of fluid milk sales were made in gallon containers. This market share has more than doubled since 1971 and is over 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 1997, 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 1997 survey.

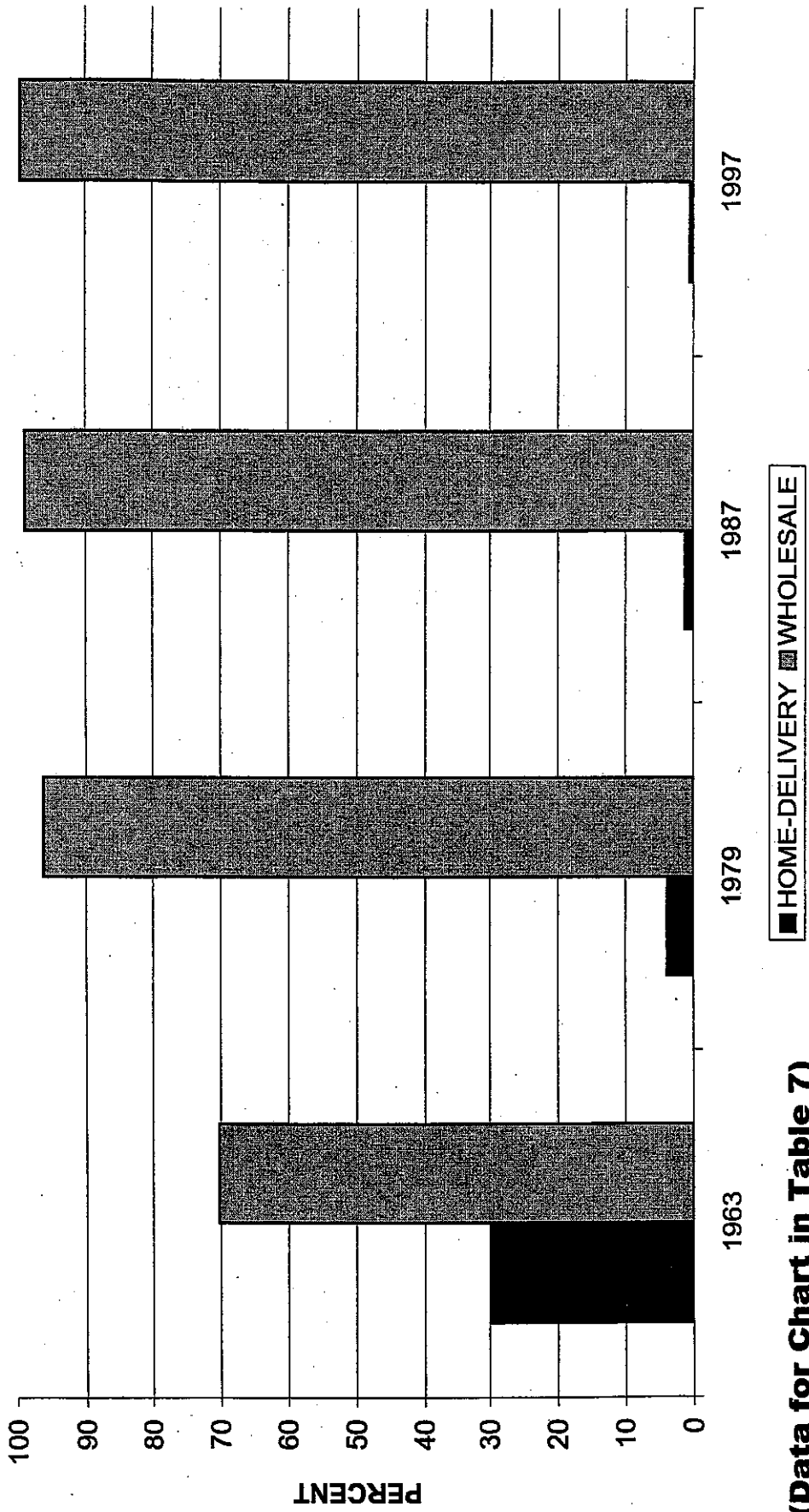
Surveys made prior to 1977 categorized all methods of distribution other than home-delivery as wholesale. Since 1977, information on the following types of wholesale distribution have been surveyed: food chain stores--supermarkets and dairy/convenience stores; institutional outlets--military and schools; and all other wholesale. Sales of fluid milk products in supermarket chain stores continued to be the predominant method of wholesale distribution with 58 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 increased to nearly 20 percent in the 1997 survey, although it has generally trended downward. Sales of fluid milk products through institutional outlets, which are dominated by schools, was slightly more than 7 percent in 1997. This market share is slightly below the previous survey and about 2 percentage points lower than 1977. The market share for the "all other" category, of which nonchain food stores are the larger proportion, decreased to about 24 percent in the 1997 survey, reestablishing a long term trend.

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



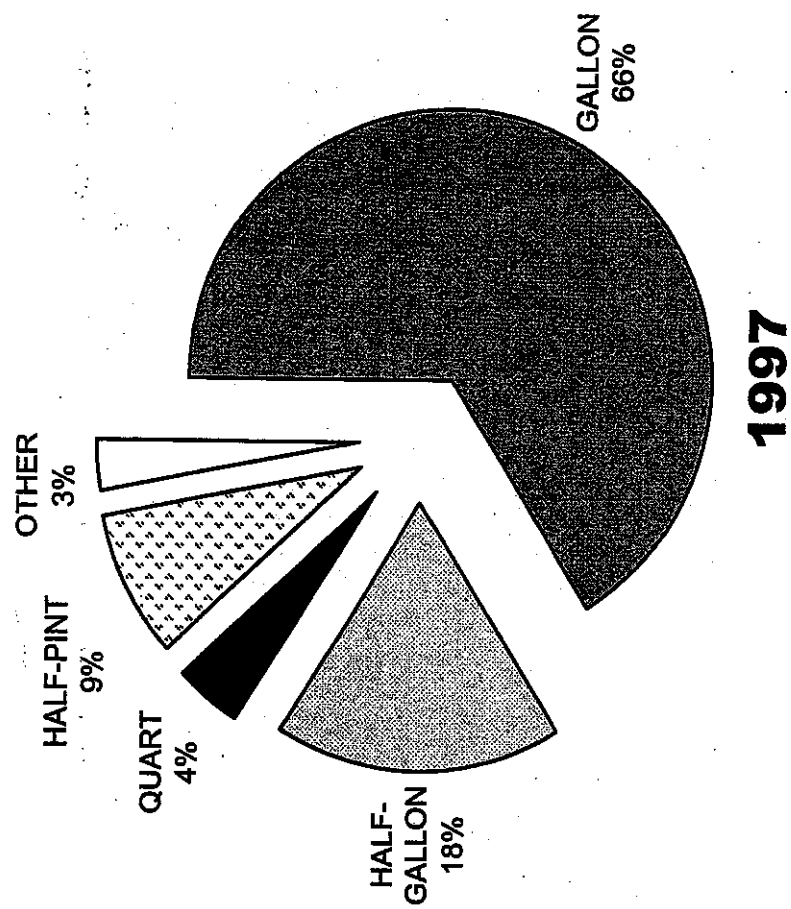
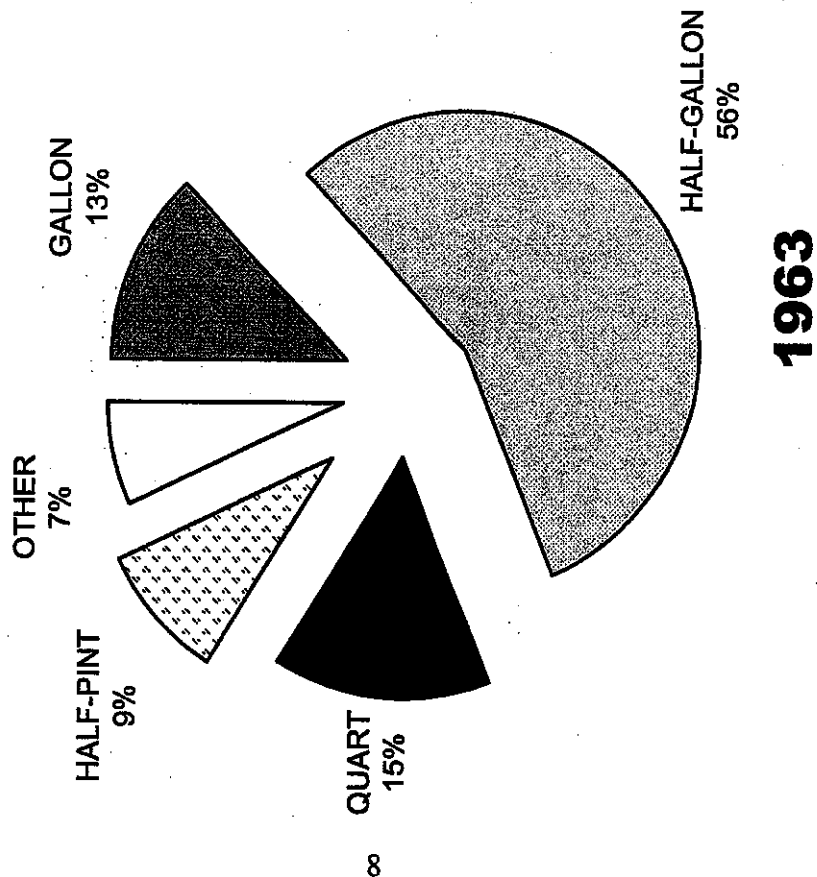
(Data for Chart in Table 1)

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 1997**



(Data for Chart in Table 2)

TABLE 1--PERCENTAGE OF WHOLE MILK PRODUCTS, FAT-REDUCED MILK PRODUCTS, AND TOTAL FLUID MILK PRODUCTS SOLD BY TYPE OF CONTAINER, BY HANDLERS REGULATED UNDER FEDERAL MILK ORDERS, NOVEMBER OF SELECTED YEARS ^{1/}, 1963-1997

Year	Glass	Paper	Plastic	Other ^{2/}	Total
<u>Whole Milk Products ^{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
1995	*	23	77	*	100
1997	*	19	81	*	100
<u>Fat-reduced Milk Products ^{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
1995	*	25	75	*	100
1997	*	22	78	*	100
<u>Total Fluid Milk Products ^{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
1995	*	24	76	*	100
1997	*	21	79	*	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 products include plain and flavored whole milk products.

^{4/} Data not available.

^{5/} Fat-reduced milk products include plain, fortified, and flavored fat-reduced milk, and buttermilk products.

^{6/} Whole milk products, and fat-reduced milk products combined.

TABLE 2--PERCENTAGE OF WHOLE MILK PRODUCTS, FAT-REDUCED MILK PRODUCTS, AND TOTAL FLUID MILK PRODUCTS SOLD BY SIZE OF CONTAINER, BY HANDLERS REGULATED UNDER FEDERAL MILK ORDERS, NOVEMBER OF SELECTED YEARS 1/, 1963-1997

Year	Gallon	Half-gallon	Quart	Pint	Half-pint	Over 10 quarts	Other	Total
<u>Whole Milk Products 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
1995	65	18	5	4	7	1	*	100
1997	68	18	5	3	6	1	*	100
<u>Fat-reduced Milk Products 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
1995	64	19	3	1	11	2	*	100
1997	65	18	3	1	11	1	*	100
<u>Total Fluid Milk Products 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
1995	64	18	4	2	10	2	*	100
1997	66	18	4	2	9	1	*	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 products include plain and flavored whole milk products.

3/ Fat-reduced milk products include plain, fortified, and flavored fat-reduced milk, and buttermilk products.

4/ Whole milk products, and fat-reduced milk products combined.

TABLE 3--SUMMARY OF FLUID MILK SALES BY SIZE AND TYPE OF CONTAINERS, BY HANDLERS REGULATED UNDER 31 FEDERAL MILK ORDERS, NOVEMBER 1997 ^{1/}

Size of Container ^{2/}	Type of Container			
	Glass	Paper	Plastic	Total
	Thousand pounds			
	<u>Whole milk products ^{3/}</u>			
Gallon	**	125	820,992	821,117
Half-gallon	1,383	83,031	129,396	213,809
Quart	329	49,776	4,769	54,874
Pint	122	34,115	6,918	41,155
Half-pint	0	64,687	2,515	67,202
6-Gallon	0	0	4,373	4,373
5-Gallon	0	0	9,405	9,405
All other sizes	0	3,384	1,061	4,446
Total of all sizes	1,834	235,118	979,429	1,216,382
	<u>Fat-reduced milk products ^{4/}</u>			
Gallon	**	583	1,585,762	1,586,345
Half-gallon	4,545	190,115	247,143	441,804
Quart	419	71,800	6,536	78,755
Pint	2	10,825	3,457	14,284
Half-pint	**	258,991	9,167	268,158
6-Gallon	0	0	3,035	3,035
5-Gallon	**	0	31,823	31,823
All other sizes	0	7,090	3,345	10,435
Total of all sizes	4,966	539,404	1,890,269	2,434,642
	<u>Total fluid milk products ^{5/}</u>			
Gallon	**	708	2,406,754	2,407,462
Half-gallon	5,928	273,146	376,539	655,613
Quart	748	121,576	11,305	133,629
Pint	124	44,940	10,375	55,439
Half-pint	**	323,677	11,682	335,359
6-Gallon	0	0	7,408	7,408
5-Gallon	**	0	41,228	41,228
All other sizes	0	10,474	4,407	14,881
Total of all sizes	6,800	774,522	2,869,698	3,651,023

** 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 products include plain and flavored whole milk products.

^{4/} Fat-reduced milk products include plain, solids added, and flavored fat-reduced milk, and buttermilk products.

^{5/} Whole milk products, and fat-reduced milk products combined.

TABLE 4--TOTAL FLUID MILK PRODUCTS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS, NOVEMBER 1997 1/

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
	Thousand pounds			
	<u>Carolina</u>			
Gallon	0	354	130,040	130,394
Half-gallon	0	837	29,779	30,616
Quart	0	3,974	0	3,974
Pint	0	2,453	0	2,453
Half-pint	0	19,716	0	19,716
6-Gallon	0	0	0	0
5-Gallon	0	0	0	0
All other sizes	0	0	0	0
Total of all sizes	0	27,334	159,819	187,153
	<u>Central Arizona</u>			
Gallon	0	0	62,374	62,374
Half-gallon	0	6,886	**	6,886
Quart	0	2,520	0	2,520
Pint	0	1,122	0	1,122
Half-pint	0	6,382	0	6,382
6-Gallon	0	0	**	**
5-Gallon	0	0	**	**
All other sizes	0	**	**	**
Total of all sizes	0	16,910	62,374	82,811
	<u>Chicago Regional</u>			
Gallon	0	**	154,632	154,632
Half-gallon	**	2,531	23,809	26,340
Quart	0	4,262	2,724	6,986
Pint	0	1,413	1,198	2,611
Half-pint	0	16,163	876	17,039
6-Gallon	0	0	0	0
5-Gallon	0	0	2,751	2,751
All other sizes	0	615	2,664	3,279
Total of all sizes	**	24,984	188,654	215,801

CONTINUED

**TABLE 4--TOTAL FLUID MILK PRODUCTS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS
BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS,
NOVEMBER 1997 1/-CONTINUED**

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
	Thousand pounds			
	<u>Eastern Colorado</u>			
Gallon	0	0	41,959	41,959
Half-gallon	0	8,701	1,536	10,237
Quart	0	2,024	**	2,024
Pint	0	810	0	810
Half-pint	0	3,589	0	3,589
6-Gallon	0	0	**	**
5-Gallon	0	0	904	904
All other sizes	0	73	4	77
Total of all sizes	0	15,197	44,403	59,705
	<u>Eastern Ohio-Western Pennsylvania</u>			
Gallon	0	0	92,214	92,214
Half-gallon	80	18,895	10,127	29,102
Quart	0	4,316	**	4,316
Pint	0	1,634	**	1,634
Half-pint	0	10,750	**	10,750
6-Gallon	0	0	39	39
5-Gallon	0	0	1,759	1,759
All other sizes	0	766	**	766
Total of all sizes	80	36,361	104,139	140,580
	<u>Great Basin</u>			
Gallon	0	0	48,616	48,616
Half-gallon	0	2,698	4,741	7,439
Quart	0	4,859	**	4,859
Pint	0	938	**	938
Half-pint	0	5,182	**	5,182
6-Gallon	0	0	**	**
5-Gallon	0	0	2,091	2,091
All other sizes	0	**	**	**
Total of all sizes	0	18,677	55,448	69,286

CONTINUED

**TABLE 4--TOTAL FLUID MILK PRODUCTS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS
BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS,
NOVEMBER 1997 1/-CONTINUED**

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
	Thousand pounds			
	<u>Indiana</u>			
Gallon	0	0	78,878	78,878
Half-gallon	0	5,774	6,056	11,830
Quart	0	1,569	**	1,569
Pint	0	936	**	936
Half-pint	0	7,851	**	7,851
6-Gallon	0	0	0	0
5-Gallon	0	0	1,688	1,688
All other sizes	0	624	0	624
Total of all sizes	0	16,754	86,622	103,902
	<u>Iowa</u>			
Gallon	0	0	56,665	56,665
Half-gallon	0	2,156	7,289	9,445
Quart	0	1,545	0	1,545
Pints	0	624	0	624
Half-pint	0	8,378	0	8,378
6-Gallon	0	0	**	**
5-Gallon	0	0	1,541	1,541
All other sizes	0	547	**	547
Total of all sizes	0	13,250	65,495	78,756
	<u>Louisville-Lexington-Evansville</u>			
Gallon	0	0	73,347	73,347
Half-gallon	0	495	9,145	9,640
Quart	0	1,053	0	1,053
Pint	0	1,007	0	1,007
Half-pint	0	6,658	0	6,658
6-Gallon	0	0	0	0
5-Gallon	0	0	0	0
All other sizes	0	0	0	0
Total of all sizes	0	9,213	82,492	91,705

CONTINUED

**TABLE 4--TOTAL FLUID MILK PRODUCTS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS
BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS,
NOVEMBER 1997 1/-CONTINUED**

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
	Thousand pounds			
	<u>Michigan Upper Peninsula</u>			
Gallon	0	0	2,612	2,612
Half-gallon	0	0	560	560
Quart	0	**	**	**
Pint	0	**	**	**
Half-pint	0	488	0	488
6-Gallon	0	0	0	0
5-Gallon	0	0	**	**
All other sizes	0	0	0	0
Total of all sizes	0	488	3,172	3,963
	<u>Middle Atlantic</u>			
Gallon	0	0	130,588	130,588
Half-gallon	564	30,803	13,984	45,351
Quart	**	10,936	255	11,191
Pint	0	3,325	675	4,000
Half-pint	0	17,103	1,543	18,646
6-Gallon	0	0	309	309
5-Gallon	0	0	2,694	2,694
All other sizes	0	770	**	770
Total of all sizes	564	62,937	150,048	213,627
	<u>Nebraska-Western Iowa</u>			
Gallon	0	0	39,242	39,242
Half-gallon	0	**	7,351	7,351
Quart	0	915	0	915
Pint	0	382	0	382
Half-pint	0	3,938	0	3,938
6-Gallon	0	0	0	0
5-Gallon	0	0	1,115	1,115
All other sizes	0	**	**	**
Total of all sizes	0	5,235	47,708	53,243

CONTINUED

**TABLE 4--TOTAL FLUID MILK PRODUCTS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS
BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS,
NOVEMBER 1997 1/-CONTINUED**

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
	Thousand pounds			
	<u>New England</u>			
Gallon	**	0	127,557	127,557
Half-gallon	718	19,953	31,728	52,399
Quart	163	8,476	1,646	10,285
Pint	0	2,741	2,293	5,034
Half-pint	**	12,059	3,179	15,238
6-Gallon	0	0	843	843
5-Gallon	0	0	3,160	3,160
All other sizes	0	990	464	1,454
Total of all sizes	881	44,219	170,870	215,971
	<u>New Mexico-West Texas</u>			
Gallon	0	0	35,297	35,297
Half-gallon	0	3,539	4,913	8,452
Quart	0	1,212	0	1,212
Pint	0	**	0	**
Half-pint	0	5,209	**	5,209
6-Gallon	0	0	0	0
5-Gallon	0	0	1,119	1,119
All other sizes	0	0	0	0
Total of all sizes	0	9,960	41,329	52,775
	<u>New York-New Jersey</u>			
Gallon	0	0	169,916	169,916
Half-gallon	1,175	80,700	27,040	108,915
Quart	483	35,132	1,285	36,900
Pint	37	4,041	677	4,755
Half-pint	0	25,677	921	26,598
6-Gallon	0	0	4,176	4,176
5-Gallon	0	0	1,578	1,578
All other sizes	0	2,212	67	2,279
Total of all sizes	1,695	147,762	205,660	355,117

CONTINUED

**TABLE 4--TOTAL FLUID MILK PRODUCTS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS
BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS,
NOVEMBER 1997 1/-CONTINUED**

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
	Thousand pounds			
	<u>Ohio Valley</u>			
Gallon	0	**	101,636	101,636
Half-gallon	0	2,866	11,608	14,474
Quart	0	2,157	**	2,157
Pint	0	1,819	550	2,369
Half-pint	0	13,475	997	14,472
6-Gallon	0	0	**	**
5-Gallon	0	0	1,487	1,487
All other sizes	0	356	**	356
Total of all sizes	0	20,673	116,278	137,093
	<u>Pacific Northwest</u>			
Gallon	0	0	122,877	122,877
Half-gallon	0	27,324	1,191	28,515
Quart	0	5,792	**	5,792
Pint	0	2,212	**	2,212
Half-pint	0	9,192	0	9,192
6-Gallon	0	0	376	376
5-Gallon	0	0	2,578	2,578
All other sizes	0	265	86	351
Total of all sizes	0	44,785	127,108	171,925
	<u>Southeast</u>			
Gallon	0	253	255,961	256,214
Half-gallon	0	9,513	55,584	65,097
Quart	0	5,938	2,172	8,110
Pint	0	5,561	2,599	8,160
Half-pint	0	48,252	2,666	50,918
6-Gallon	0	0	73	73
5-Gallon	0	0	2,559	2,559
All other sizes	0	59	456	515
Total of all sizes	0	69,576	322,070	391,646

CONTINUED

**TABLE 4--TOTAL FLUID MILK PRODUCTS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS
BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS,
NOVEMBER 1997 1/-CONTINUED**

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
	Thousand pounds			
	<u>Southeastern Florida</u>			
Gallon	0	0	47,677	47,677
Half-gallon	0	**	17,389	17,389
Quart	0	**	**	**
Pint	0	**	0	**
Half-pint	0	**	0	**
6-Gallon	0	0	**	**
5-Gallon	0	0	**	**
All other sizes	0	0	0	0
Total of all sizes	0	**	65,066	78,523
	<u>Southern Illinois-Eastern Missouri</u>			
Gallon	0	**	61,004	61,004
Half-gallon	784	2,972	5,362	9,118
Quart	0	1,692	**	1,692
Pint	0	1,010	0	1,010
Half-pint	0	7,528	0	7,528
6-Gallon	0	0	**	**
5-Gallon	0	0	2,019	2,019
All other sizes	0	72	**	72
Total of all sizes	784	13,274	68,385	82,553
	<u>Southern Michigan</u>			
Gallon	0	0	113,486	113,486
Half-gallon	**	3,529	18,426	21,955
Quart	**	7,849	**	7,849
Pint	0	1,820	367	2,187
Half-pint	0	15,956	**	15,956
6-Gallon	0	0	**	**
5-Gallon	0	0	1,540	1,540
All other sizes	0	574	**	574
Total of all sizes	**	29,728	133,819	163,968

CONTINUED

**TABLE 4--TOTAL FLUID MILK PRODUCTS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS
BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS,
NOVEMBER 1997 1/-CONTINUED**

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
	Thousand pounds			
	<u>Southwest Plains</u>			
Gallon	0	0	84,087	84,087
Half-gallon	0	1,606	17,407	19,013
Quart	0	2,014	0	2,014
Pint	0	1,882	0	1,882
Half-pint	0	11,718	0	11,718
6-Gallon	0	0	0	0
5-Gallon	0	0	1,557	1,557
All other sizes	0	**	**	**
Total of all sizes	0	17,220	103,051	120,488
	<u>Southwestern Idaho-Eastern Oregon</u>			
Gallon	**	0	10,283	10,283
Half-gallon	**	**	245	245
Quart	**	**	0	**
Pint	0	**	0	**
Half-pint	0	**	0	**
6-Gallon	0	0	0	0
5-Gallon	0	0	**	**
All other sizes	0	**	0	**
Total of all sizes	**	**	10,528	14,837
	<u>Tampa Bay</u>			
Gallon	0	0	67,888	67,888
Half-gallon	0	**	22,058	22,058
Quart	0	**	**	**
Pint	0	**	**	**
Half-pint	0	**	**	**
6-Gallon	0	0	0	0
5-Gallon	0	0	**	**
All other sizes	0	**	0	**
Total of all sizes	0	**	89,946	107,385

CONTINUED

**TABLE 4--TOTAL FLUID MILK PRODUCTS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS
BY HANDLERS REGULATED UNDER SELECTED FEDERAL MILK ORDERS,
NOVEMBER 1997 1/-CONTINUED**

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
Thousand pounds				
<u>Texas</u>				
Gallon	0	0	180,504	180,504
Half-gallon	0	10,785	27,929	38,714
Quart	0	5,049	**	5,049
Pint	**	4,278	**	4,278
Half-pint	0	28,676	0	28,676
6-Gallon	0	0	0	0
5-Gallon	0	0	1,899	1,899
All other sizes	0	51	**	51
Total of all sizes	**	48,839	210,332	259,726
<u>Upper Midwest</u>				
Gallon	0	0	69,250	69,250
Half-gallon	**	23,953	10,080	34,033
Quart	0	2,901	**	2,901
Pint	0	919	**	919
Half-pint	0	12,493	**	12,493
6-Gallon	0	0	**	**
5-Gallon	**	0	4,065	4,065
All other sizes	0	1,306	317	1,623
Total of all sizes	**	41,572	83,712	125,820

** 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 PRODUCTS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS UNDER 31 FEDERAL MILK ORDERS, NOVEMBER 1997 1/

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
Thousand pounds				
<u>Whole milk products</u>				
Gallon	**	122	822,400	820,522
Half-gallon	1,115	79,791	123,612	204,519
Quart	266	41,438	3,216	44,920
Pint	49	14,976	3,517	18,542
Half-pint	**	59,620	1,991	61,612
6-Gallon	0	0	4,279	4,279
5-Gallon	0	0	9,048	9,048
All other sizes	0	2,722	893	3,615
Total of all sizes	1,430	198,670	966,957	1,167,058
<u>Flavored whole milk products</u>				
Gallon	0	3	592	595
Half-gallon	267	3,239	5,784	9,290
Quart	63	8,338	1,553	9,955
Pint	73	19,139	3,401	22,613
Half-pint	0	5,066	524	5,590
6-Gallon	0	0	94	94
5-Gallon	0	0	357	357
All other sizes	0	662	168	830
Total of all sizes	404	36,447	12,472	49,324
<u>2% milk - plain</u>				
Gallon	0	394	835,841	836,235
Half-gallon	1,611	64,375	102,063	168,050
Quart	**	21,265	1,119	22,383
Pint	0	3,200	494	3,694
Half-pint	0	71,388	1,713	73,101
6-Gallon	0	0	2,070	2,070
5-Gallon	**	0	20,170	20,170
All other sizes	0	2,818	1,638	4,456
Total of all sizes	1,611	163,440	965,108	1,130,174

CONTINUED

TABLE 5--INDIVIDUAL FLUID MILK PRODUCTS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS UNDER 31 FEDERAL MILK ORDERS, NOVEMBER 1997 1/--CONTINUED

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
	Thousand pounds			
	<u>2% milk - milk solids added</u>			
Gallon	0	53	40,711	40,763
Half-gallon	0	1,908	5,403	7,311
Quart	0	483	**	483
Pint	0	**	**	**
Half-pint	0	2,061	**	2,061
6-Gallon	0	0	0	0
5-Gallon	0	0	**	**
All other sizes	0	**	**	**
Total of all sizes	0	4,505	46,114	51,735
	<u>1% milk - plain</u>			
Gallon	0	**	259,995	259,995
Half-gallon	904	36,880	39,112	76,896
Quart	**	8,919	922	9,841
Pint	0	212	552	764
Half-pint	0	30,542	966	31,509
6-Gallon	0	0	104	104
5-Gallon	0	0	1,717	1,717
All other sizes	0	1,146	273	1,419
Total of all sizes	904	77,699	303,642	387,168
	<u>1% milk - milk solids added</u>			
Gallon	0	**	6,413	6,413
Half-gallon	26	1,653	1,604	3,282
Quart	40	287	**	327
Pint	0	**	0	**
Half-pint	0	**	0	**
6-Gallon	0	0	5	5
5-Gallon	0	0	**	**
All other sizes	0	**	0	0
Total of all sizes	65	1,940	8,022	10,823

CONTINUED

TABLE 5--INDIVIDUAL FLUID MILK PRODUCTS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS UNDER 31 FEDERAL MILK ORDERS, NOVEMBER 1997 1/--CONTINUED

Size of Container 2/	Type of Container			
	Glass	Paper	Plastic	Total
Thousand pounds				
<u>Skim milk - plain</u>				
Gallon	0	55	390,337	390,392
Half-gallon	1,975	55,779	65,910	123,664
Quart	201	19,465	948	20,614
Pint	1	400	128	529
Half-pint	0	21,238	86	21,324
6-Gallon	0	0	570	570
5-Gallon	0	0	5,860	5,860
All other sizes	0	1,671	1,029	2,701
Total of all sizes	2,177	98,608	464,869	565,654
<u>Skim milk - milk solids added</u>				
Gallon	0	14	30,915	30,929
Half-gallon	0	4,688	11,639	16,328
Quart	0	1,815	**	1,815
Pint	0	0	0	0
Half-pint	0	1,929	0	1,929
6-Gallon	0	0	**	**
5-Gallon	0	0	**	**
All other sizes	0	**	0	**
Total of all sizes	0	8,446	42,554	51,443
<u>Flavored fat-reduced milk products</u>				
Gallon	**	2	12,837	12,839
Half-gallon	**	6,852	8,722	15,574
Quart	58	8,278	1,322	9,658
Pint	1	6,229	2,124	8,424
Half-pint	0	129,969	6,310	136,279
6-Gallon	0	0	197	197
5-Gallon	0	0	3,037	3,037
All other sizes	0	1,419	244	1,663
Total of all sizes	59	152,820	34,792	187,679

CONTINUED

TABLE 5--INDIVIDUAL FLUID MILK PRODUCTS SOLD IN VARIOUS SIZES AND TYPES OF CONTAINERS BY HANDLERS UNDER 31 FEDERAL MILK ORDERS, NOVEMBER 1997 ^{1/}--CONTINUED

Size of Container ^{2/}	Type of Container			
	Glass	Paper	Plastic	Total
	Thousand pounds			
	<u>Buttermilk</u>			
Gallon	**	32	3,900	3,932
Half-gallon	**	17,980	12,691	30,671
Quart	**	11,289	1,417	12,706
Pint	0	666	48	713
Half-pint	0	1,279	6	1,286
6-Gallon	0	0	**	**
5-Gallon	0	0	411	411
All other sizes	0	**	155	155
Total of all sizes	**	31,246	18,628	49,965

** 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 PRODUCTS ^{1/} DISTRIBUTED BY HANDLERS REGULATED UNDER FEDERAL MILK ORDERS, GROUPED BY REGION, BY TYPE AND SIZE OF CONTAINER, NOVEMBER 1997

Region ^{2/}	Total sales of fluid milk products	Type of Container		
		Glass ^{3/}	Paper	Plastic
	<u>Mil. lbs.</u>		<u>Percent of total sales</u>	
North Atlantic	784.7	0.4	32.5	67.1
Southeastern	764.7	0.0	16.1	83.9
East North Central	939.8	0.3	16.1	83.5
West North Central	257.8	R	23.5	76.5
Southwest	380.2	R	17.4	82.6
Mountain	279.4	R	21.7	78.3
Pacific	171.9	0.0	26.0	74.0
Total ^{4/}	3,651.0	0.2	21.2	78.6

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	54.5	26.3	7.4	1.8	7.7	1.6	0.6
Southeastern	65.7	17.9	2.2	1.8	11.8	0.5	0.1
East North Central	72.1	13.3	2.8	1.3	8.6	1.2	0.6
West North Central	64.1	19.9	2.1	0.8	9.7	2.6	0.9
Southwest	69.6	15.2	1.9	1.7	10.6	0.9	0.1
Mountain	71.1	13.4	4.0	1.5	7.9	1.9	0.2
Pacific	71.5	16.6	3.4	1.3	5.3	1.7	0.2
Total ^{4/}	65.9	18.0	3.7	1.5	9.2	1.3	0.4

R = Restricted

^{1/} Fluid milk products include plain and flavored whole milk products; plain, fortified, and flavored fat-reduced milk products; and miscellaneous whole and fat-reduced 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 PRODUCTS ^{1/} DISTRIBUTED BY HANDLERS REGULATED UNDER FEDERAL MILK ORDERS, BY METHODS OF DISTRIBUTION, AND TYPE OF WHOLESALE OUTLET, NOVEMBER OF SELECTED YEARS, 1963 TO 1997

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	--	--	--	--	--	--
1974	6.9	93.1	--	--	--	--	--	--
1977	5.3	94.7	42.9	10.0	1.7 ^{5/}	7.7 ^{5/}	32.8	
1979	3.8	96.2	46.2	10.7	1.5	7.6	30.2	
1981	2.3	97.7	49.7	9.8	1.4	6.8	29.9	
1983	1.8	98.2	50.2	9.8	1.4	6.7	30.1	
1985	1.5	98.5	52.6	9.4	1.2	6.8	28.5	
1987	1.2	98.8	51.2	10.6	1.4	7.1	28.5	
1989	1.0	99.0	53.8	10.4	1.0	6.7	27.1	
1991	1.0	99.0	55.2	10.4	1.0	6.7	25.8	
1993	1.0	99.0	57.3	10.7	1.1	6.6	23.4	
1995	0.7	99.3	56.5	10.2	1.0	6.5	25.1	
1997	0.5	99.5	57.6	10.2	0.9	6.3	24.4	

^{1/} Fluid milk products include plain and flavored whole milk products; plain, fortified, and flavored fat-reduced milk products; and miscellaneous whole, fat-reduced 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 PRODUCTS 1/ DISTRIBUTED BY HANDLERS REGULATED UNDER FEDERAL MILK ORDERS, GROUPED BY REGION, BY METHOD OF DISTRIBUTION, NOVEMBER 1997

Region 2/	Total sales of fluid milk products	Method of distribution																				
		Home-delivery	Total wholesale	Type of wholesale outlet 3/					All other 5/													
				Chain stores 4/		Total	Institutional															
				Total	Supermarket		Dairy and convenience	Military		Schools												
	<u>Mil. lbs</u>																					
North Atlantic	784.7	0.4	99.6	72.0	57.4	14.5	5.4	0.5	4.9	22.1												
Southeastern	764.7	0.5	99.5	69.2	60.4	8.8	9.8	1.5	8.2	20.6												
East North Central	939.8	0.4	99.6	62.1	51.2	10.9	6.7	0.3	6.4	30.8												
West North Central	257.8	1.0	99.0	72.7	63.3	9.4	7.1	0.4	6.7	19.3												
Southwest	380.2	R	100.0	69.8	60.8	9.0	8.3	1.1	7.2	21.9												
Mountain	279.4	2.1	97.9	64.9	59.6	5.2	6.3	1.7	4.6	26.7												
Pacific	171.9	0.4	99.6	68.0	63.0	5.0	5.5	1.5	4.1	26.1												
All region total 6/	3,651.0	0.5	99.5	67.8	57.6	10.2	7.2	0.9	6.3	24.4												

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 products include plain and flavored whole milk products; plain, fortified, and flavored fat-reduced milk products; and miscellaneous whole, fat-reduced 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 PRODUCTS ^{1/} DISTRIBUTED BY HANDLERS REGULATED UNDER FEDERAL MILK ORDERS, GROUPED BY REGION, BY TYPE OF CHAIN STORE, NOVEMBER 1997

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	72.0	9.5	47.9	5.3	9.2	14.8
Southeastern	69.2	29.4	31.0	1.2	7.5	30.6
East North Central	62.1	8.8	42.3	1.5	9.4	10.4
West North Central	72.7	0	63.3	0	9.4	0
Southwest	69.8	32.8	27.9	R	9.0	32.8
Mountain	64.9	29.4	30.2	R	5.2	29.4
Pacific	68.0	31.4	31.5	0	5.0	31.4
All Region Total ^{5/}	67.8	17.6	40.0	2.1	8.1	19.7

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

^{1/} Fluid milk products include plain and flavored whole milk products; plain, fortified, and flavored fat-reduced milk products; and miscellaneous whole, fat-reduced 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 PRODUCTS 1/ DISTRIBUTED BY HANDLERS REGULATED UNDER FEDERAL MILK ORDERS, BY METHOD OF DISTRIBUTION, BY MARKETING AREA, NOVEMBER 1997

Federal milk order marketing area	Method of Distribution										
	Home-delivery	Total wholesale	Food chain stores 3/			Type of wholesale outlet 2/				All other 5/	
			Total	Supermarkets	Dairy and convenience	Total	Institutional 4/	Military	Schools		
Percent											
NORTH ATLANTIC											
New England	0.8	99.2	72.9	56.2	16.7	3.7	0.4		3.3	22.6	
New York-New Jersey	0.2	99.8	73.9	61.8	12.2	5.8	6/		5.8	20.1	
Middle Atlantic	0.2	99.8	67.9	51.6	16.3	6.5	1.4		5.1	25.4	
SOUTHEASTERN											
Carolina	0	100.0	75.7	68.9	6.9	10.6	1.6		8.9	13.7	
Southeast	0.3	99.7	61.3	50.3	11.0	11.8	2.0		9.8	26.6	
Tampa Bay	0	100.0	77.1	77.1	7/	5.3	6/		5.3	17.6	
Southeastern Florida	8/	100.0	82.1	82.1	0	8/	8/		8/	17.9	
EAST NORTH CENTRAL											
Michigan Upper Peninsula	0.4	99.6	22.1	22.1	0	20.3	0		20.3	57.1	
Southern Michigan	0.3	99.7	74.6	53.5	21.1	7.4	0.1		7.3	17.7	
E. Ohio-W. Pennsylvania	0.6	99.4	71.0	56.8	14.3	6.2	0		6.2	22.2	
Ohio Valley	8/	100.0	53.8	48.0	5.8	8.8	6/		8.8	37.3	
Indiana	0	100.0	45.1	43.9	1.2	6.4	0.2		6.2	48.6	
Chicago Regional	0.5	99.5	53.5	45.8	7.7	5.6	0.2		5.5	40.3	
S. Illinois-E. Missouri	0	100.0	60.5	51.8	8.7	5.1	6/		5.1	34.3	
Louis.-Lex.-Evans.	0	100.0	80.8	64.4	16.4	7.1	1.5		5.5	12.1	
WEST NORTH CENTRAL											
Upper Midwest	1.9	98.1	69.3	54.4	15.0	6.7	0.2		6.5	22.1	
Iowa	8/	100.0	75.5	70.5	5.0	8.9	6/		8.9	15.6	
Nebraska-Western Iowa	8/	100.0	76.4	73.8	2.6	5.1	6/		5.1	18.5	

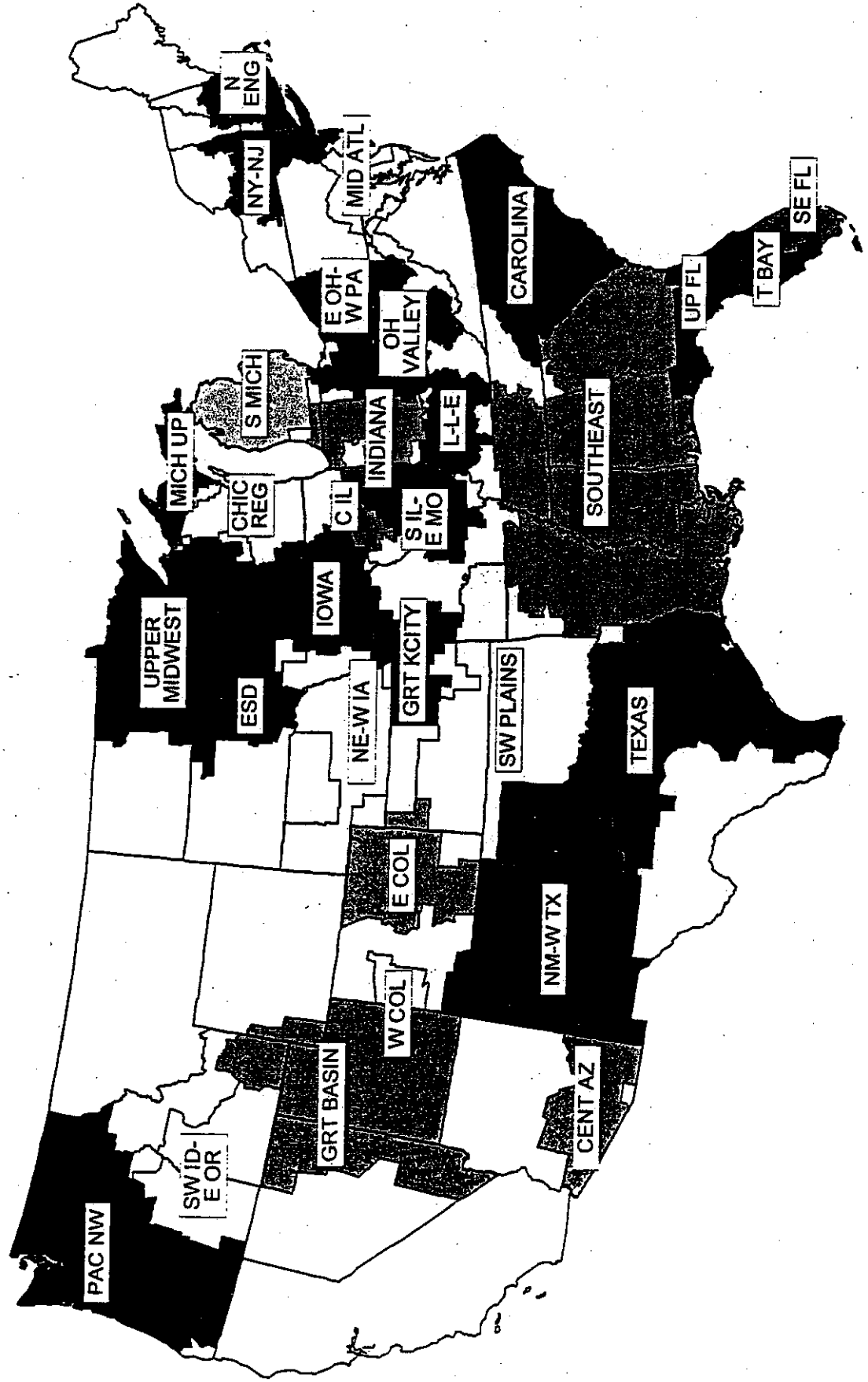
CONTINUED

TABLE 10--PERCENTAGE OF FLUID MILK PRODUCTS 1/ DISTRIBUTED BY HANDLERS REGULATED UNDER FEDERAL MILK ORDERS, BY METHOD OF DISTRIBUTION, BY MARKETING AREA, NOVEMBER 1997--CONTINUED

Federal milk order marketing area	Method of Distribution							All other 5/	
	Home-delivery	Total wholesale	Type of wholesale outlet 2/						Schools
			Food chain stores 3/		Dairy and convenience	Institutional 4/			
			Total	Supermarkets		Total	Military		
Percent									
SOUTHWEST									
Southwest Plains	8/	100.0	62.3	52.4	9.9	8.0	1.2	6.8	29.6
Texas	0	100.0	73.3	64.7	8.6	8.4	1.1	7.4	18.3
MOUNTAIN									
Eastern Colorado	8/	100.0	71.0	63.9	7.1	8.2	2.6	5.7	20.8
SW. Idaho-E. Oregon	0.3	99.7	64.2	54.5	9.6	7.3	1.1	6.2	28.2
Great Basin	8/	100.0	54.2	51.2	2.9	6.5	2.5	3.9	39.4
Central Arizona	0	100.0	66.6	66.6	7/	8/	8/	8/	33.4
New Mexico-West Texas	0	100.0	69.3	64.2	5.2	5.5	6/	5.5	25.1
PACIFIC									
Pacific Northwest	0.4	99.6	68.0	63.0	5.0	5.5	1.5	4.1	26.1
All Market Total 9/	0.5	99.5	67.8	57.6	10.2	7.2	0.9	6.3	24.4

1/ Fluid milk products include plain and flavored whole milk products; plain, fortified, and flavored fat-reduced milk products; and miscellaneous whole, fat-reduced 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 supermarkets.
 8/ Restricted. Represents data for fewer than three handlers. Data are included in all other wholesale.
 9/ Includes the Central Illinois, Eastern South Dakota, Greater Kansas City, Upper Florida, 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, October 1, 1997



**APPENDIX B--FLUID MILK PRODUCT SALES, UNITED STATES, 1965, 1970, 1975,
AND 1980-95**

Year	Fluid whole milk ^{1/}	Fat-reduced 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
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	20,115	35,084	55,199
1995	19,441	35,349	54,790
1996	19,488	35,902	55,390
1997	19,207	35,915	55,122

^{1/} Plain and flavored whole milk.

^{2/} Fat-reduced (2 percent, 1 percent, and 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
Southeast
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

Central Illinois
Eastern South Dakota
Greater Kansas City
Upper Florida
Western Colorado

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

In the Summary of "Federal Milk Order Statistics" (FMOS-430), there appeared a special article that highlighted some of the more important findings of the 1997 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 3 percentage point increase pushed the market share of plastic to 79 percent. Sales of fluid milk in paper containers accounted for 21 percent of total sales, while glass containers accounted for less than one-half of one percent of total sales. (See table 1.)

(2) The proportion of fluid milk products sold in plastic increased significantly for nearly all container sizes. The market share of plastic pint containers increased by 10.5 percentage points to 18.7; the introduction of resealable, milk bottle shaped containers likely contributed largely to this increase. The market shares for plastic half-gallons increased by 6.1 percentage points and plastic quarts increased 5.5 percentage points to 57.4 and 8.5, respectively. (See page 39.)

(3) 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 over 67 percent in the North Atlantic region to almost 84

percent in the Southeastern region. Glass containers accounted for less than 1 percent of total sales in all regions. (See table 6.)

(4) Plastic containers accounted for nearly 80 percent or more of the sales of whole milk, 2% and 1% milk, and skim milk. Conversely, about 74 percent or more of the sales of flavored whole and fat-reduced milk were sold in paper containers. (See page 38.)

(5) The market share of fluid milk products sold in gallons increased to 65.9 percent. Conversely, the market share of half-gallon containers dropped to 18.0 percent. About 9.2 percent of total sales were made in half-pint containers--down from the previous survey. Market shares of other container sizes generally decreased from 1995. (See tables 2 and 6.)

(6) 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 54.5 percent in the North Atlantic region to 72.1 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 twice the national average. (See table 6.)

(7) Gallon containers accounted for much larger proportions of the sales of whole milk, 2% reduced-fat milk, 1% lowfat milk, and skim milk. On the other hand, about 57 percent of the sales of flavored whole milk

and more than 77 percent of the sales of flavored fat-reduced 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 38.)

(8) 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 39.)

For example, in the North Atlantic region, the proportion of fluid milk products sold in paper containers was significantly higher—32.5 percent compared to the national average of 21.2 percent. (See table 6.)

This occurred because the proportion of fluid milk products sold in this region in half-gallon and quart containers—sizes for which paper is a prominent type—was significantly higher. (See table 6 and page 39.) Similarly, both flavored whole milk and flavored fat-reduced milk had more than 73 percent of their sales in paper containers because over 77 percent of these products were sold in container sizes for which paper is dominant—quart and smaller sizes. (See pages 38 and 39.)

(9) The proportion of fluid milk products sold through wholesale outlets increased slightly. The market share of wholesale in all markets in 1997 was 99.5 percent of total sales; the remaining 0.5 percent was home-

delivered. (See table 7.)

(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 region showed a significant increase, and the East North Central and Mountain regions showed notable decreases, in the importance of the food chain store category. Food chain stores showed greater variation in the proportions of sales across regions than in earlier surveys, with the largest proportion in the West North Central region and the smallest in the Mountain region.

The market share of supermarket chains increased to 57.6 percent while the market share of dairy/convenience stores at 10.2 percent was unchanged from 1995. 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 19.7 percent, up from 18.6 percent in 1995. Sales by vertically integrated supermarket chains accounted for 17.6 percent of total sales, while dairy/convenience store chains accounted for 2.1 percent. (See table 9.)

(12) Vertical integration of food chains showed significant regional variation. In the Southwest region, nearly 33 percent of total fluid milk sales were made by vertically integrated food chains. There was no vertical integration in the West North Central. Vertically integrated supermarket chains accounted for 29.4 to 32.8 percent of total sales in 4 regions, more than 3 times the market share of these firms in the other two

two regions. The market share of vertically integrated dairy/convenience chains in the North Atlantic region was 5.3 percent, well above the national average of 2.1 percent. (See table 9.)

(13) Fluid milk sales through institutional outlets (military and schools) totaled 7.2

percent of total sales, down slightly from 1995. Sales through all other wholesale outlets (nonchain food stores, nonfood stores, restaurants, hospitals, vending machines, etc., combined) accounted for 24.4 percent of total sales, down from 1995. (See table 8.)

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 1997

Fluid milk product	Total sales in all markets combined Mil. lbs.	Type of container		
		Glass	Paper	Plastic
Whole milk	1,167.1	0.1	17.0	82.9
Flavored whole milk	49.3	0.8	73.9	25.3
2% milk	1,181.9	0.1	14.2	85.7
1% milk	398.0	0.3	20.2	79.6
Skim milk	617.1	0.4	17.4	82.3
Flavored fat-reduced milk	187.7	*	81.4	18.5
Buttermilk	50.0	R	62.6	37.4
Total fluid milk products	3,651.0	0.2	21.2	78.6

Fluid milk product	Size of container						
	Gallon	Half-gallon	Quart	Pint	Half-pint	5 & 6 gallons	Other
Whole milk	70.3	17.5	3.8	1.6	5.3	1.1	0.3
Flavored whole milk	1.2	18.8	20.2	45.8	11.3	0.9	1.7
2% milk	74.2	14.8	2.0	0.3	6.4	1.9	0.4
1% milk	68.2	20.1	2.6	0.2	8.1	0.5	0.4
Skim milk	68.3	22.7	3.7	0.1	3.8	1.1	0.4
Flavored fat-reduced milk	6.8	8.3	5.1	4.5	72.6	1.7	0.9
Buttermilk	7.9	61.4	25.4	1.4	2.6	0.9	0.3
Total fluid milk products	65.9	18.0	3.7	1.5	9.2	1.3	0.4

* Less than one-tenth of one percent.

R= Restricted.

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

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

PERCENTAGE OF TOTAL FLUID MILK PRODUCTS ^{1/} DISTRIBUTED BY HANDLERS REGULATED UNDER FEDERAL MILK ORDERS, ALL MARKETS COMBINED ^{2/}, BY SIZE OF CONTAINER, BY TYPE OF CONTAINER, NOVEMBER 1997

Size of container ^{3/}	Total sales of fluid milk products	Type of container		
		Glass	Paper	Plastic
	<u>Mil. lbs.</u>		<u>Percent of total sales</u>	
Gallon	2,407.5	R	*	99.9
Half-gallon	655.6	0.9	41.7	57.4
Quart	133.6	0.6	91.0	8.5
Pint	55.4	0.2	81.1	18.7
Half-pint	335.4	R	96.5	3.5
6-gallon	7.4	0	0	100.0
5-gallon	41.2	R	0	100.0
All other	14.9	0	70.4	29.6
Total of all sizes	3,651.0	0.2	21.2	78.6

* Less than one-tenth of one percent.

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 fat-reduced milk products; buttermilk; and miscellaneous whole and fat-reduced 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.

The United States Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, or marital or familial status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means of communication of program information (Braille, large print, audiotape, etc.) should contact the USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue SW. Washington, DC, 20250-9410, or call (202) 720-5964 (voice and TDD). USDA is an equal employment opportunity provider and employer.