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# **Packaged Fluid Milk Sales in Federal Milk Order Markets:**

## **By Size and Type of Container And Distribution Method During November 2007**

## **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. The information in this report is based on a survey of fluid milk sales under Federal milk marketing orders during November 2007. Its purpose was to update a similar survey in November 2005, and to see if trends observed in past surveys are continuing. Data were obtained from milk handlers regulated under the 10 marketing orders.

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.

The tables in this report provide historical information from past surveys and detailed information from the current survey. Information is presented for individual orders and for all orders combined. The data in this report are percentages of total fluid milk products sold by regulated handlers. The number of each size of container can be approximated by using the additional information as shown in the appendices at the end of the report.

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

The following are recognized for their contributions to this report: the Federal milk order market administrator staffs; and the Market Information Branch staff of Dairy Programs.

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## SURVEY HIGHLIGHTS

Some highlights of this survey with comparisons to previous years are:

- (1) The proportion of total fluid milk products sold in plastic containers decreased slightly, marking the end of the long-term trend of increases in evidence since this survey was first taken in 1963. As a result of the 0.4 percentage point decrease, the market share of plastic is 84.5 percent. Sales of fluid milk in paper containers increased slightly to 15.2 percent of total sales, while glass containers remained at 0.2 percent of total sales. (See table 1.)
- (2) The proportion of total fluid milk products sold in plastic increased or held steady for nearly all container sizes smaller than a half-gallon. The largest increase from 2005 occurred in round half-pints to 0.8 percent. However, the market shares of half-gallons, gallons, and pints decreased by 0.8, 0.3, and 0.3 percent, respectively. (See table 3.)
- (3) Plastic containers accounted for 81 percent or more of the sales of whole milk, reduced fat (2%) milk, low fat (1%) milk, and fat-free (skim) milk. Conversely, about 61 percent of the sales of flavored fat-reduced milk were sold in paper containers. The market share for buttermilk sold in plastic increased by 6.7 percentage points to 68.3 percent. On the other hand, the market shares of eggnog and low fat (1%) milk sold in plastic decreased by 5.6 percentage points and 3.2 percentage points to 43.7 percent and 81.0 percent, respectively. (See table 3.)
- (4) In each of the Federal milk orders, significantly more fluid milk products were sold in plastic containers than in paper and glass combined. Market shares of plastic ranged from 76.5 percent in the Northeast order to 93.0 percent in the Florida order. Glass containers were used in 6 of the 10 orders; however, individual order data was restricted in all those orders except the Northeast and Upper Midwest orders. (See table 4.)

When reviewing the individual order relationships shown in this report, it is important to remember the particular milk sales statistic being surveyed. See 2/ on Appendix Table 1.

- (5) Single-serve, round plastic containers accounted for 2.4 percent of total fluid milk product sales. On a regional basis, single-serve round containers ranged from 4.2 percent of total fluid milk product sales in the Southwest to 0.1 percent in the Southeast order. Over 36 percent of flavored whole milk sales were made in these round containers as compared to 0.5 percent of skim milk sales. Pints accounted for 46 percent of the sales of this type of container, half-pints about 33 percent, and other sizes about 21 percent. Of the total sales of fluid milk products in plastic pints and half-pints, 76 and 52 percent, respectively, were in these single-serve round plastic containers. (See tables 3 and 5.)

An important fact to mention is that the fluid milk products included in this survey are those that fall into the Class I use category under Federal milk orders. Thus, the use of this type of container in the distribution of milk products that are consumed as a beverage but are not Class I products is not included in this report.

- (6) The market share of total fluid milk products sold in gallons decreased slightly to 64.7 percent. This market share has appeared to plateau at about this level over the last several surveys. The market share of half-gallon containers also decreased slightly to 18.0 percent. Conversely, about 10.5 percent of total sales were made in half-pint containers, an increase of 0.5 percentage points from the previous survey. Fluid milk products sold in the quart and pint container sizes both decreased by 0.1 percentage points to 3.2 and 1.6 percentage points, respectively. Sales in 12 ounce and 10 ounce container sizes held steady, while 14 ounce containers decreased slightly to a 0.1 percent share. (See tables 2 and 3.)
- (7) For nearly all container sizes, plastic accounted for larger proportions of total sales. Plastics' share of gallons now stands at nearly 100.0 percent, while plastics' share of half-gallons decreased over 3 percentage points to 74.6 percent. For pint containers, the share sold in plastic was 0.6 percentage points lower at 92.4 percent. For "other" sizes, the share increased markedly to 90.4 percent. The single-serve, round (milk bottle shaped) container likely contributed largely to the increases in the "other" size shares. The plastic share of quarts increased over 3 points to 47.1 percentage points. (See table 3.)
- (8) Gallon containers accounted for much larger proportions of the sales of whole milk, reduced-fat milk (2%), low fat (1%) milk, and fat-free (skim) milk. On the other hand, about 47 percent of the sales of flavored whole milk and about 75 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. The most notable increase in market share was 8.6 percentage points for flavored whole milk sold in round pint containers. Much more buttermilk was sold in half-gallon containers than in other sizes. Eggnog had over 93 percent of its sales in half-gallon and quart containers. (See table 3.)
- (9) In each of the Federal milk orders, a larger proportion of total fluid milk products were sold in gallon containers than in all other sizes combined. The market share of gallons ranged from 52.9 percent in the Northeast order to 76.3 percent in the Arizona order. The proportion of fluid milk products sold in half-pint containers was notably larger in the Southeast and Southwest. (See table 4.)
- (10) The proportion of fluid milk products sold through wholesale outlets increased slightly to 99.7 percent. The remaining 0.3 percent was home-delivered. (See table 6.)

- (11) The most important wholesale outlet continues to be food chain stores, which accounted for more than 55 percent of total fluid milk sales. However, the market share of this wholesale distribution method did drop 1.6 percentage points in the current survey. Fluid milk sales through institutional outlets (military and schools) totaled 7.9 percent of total sales, up from 2005, almost completely as a result of sales in schools. Sales through all other wholesale outlets accounted for 36.2 percent of total sales, up 1.0 percentage point from 2005. (See tables 6 and 7.)
- (12) The food chain store method of distribution is further broken down into supermarkets and dairy/convenience stores. Sales of fluid milk products through supermarkets accounted for 47.0 percent of total sales, down about 1.1 percentage points from 2005. On a regional basis, the supermarkets market share ranged from 37.3 percent in the Upper Midwest order to 57.6 percent in the Florida order. Sales of fluid milk products through dairy/convenience stores accounted for 8.5 percent of total sales, down 0.6 percentage points. A much larger proportion of fluid milk sales occurred at this method of distribution in the Northeast order. (See table 7.)
- (13) The market share of vertically integrated food chain stores totaled 22.8 percent, down slightly from 25.4 percent in 2005. Sales by vertically integrated supermarket chains showed a market share of 19.3 percent of total sales, while vertically integrated dairy/convenience store chains accounted for 3.4 percent of total sales. Vertical integration of supermarket chains showed significant regional variation. In the Florida order, over 57 percent of total fluid milk sales were made by vertically integrated supermarket chains. There were virtually no sales made by vertically integrated supermarket chains in the Upper Midwest. Vertically integrated supermarket chains accounted for about 85 percent of food chain store vertical integration. The market share of vertically integrated dairy/convenience chains in the Northeast was 7.9 percent, over two times the national average of 3.4 percent. (See table 8.)
- (14) Schools were the predominant institutional outlet. Sales of total fluid milk products through elementary, high school, and college outlets totaled 6.9 percent, 0.8 percentage points above 2005, reversing a trend from the last couple surveys. On a regional basis, the market share of schools ranged from 10.1 percent in both the Southeast and Southwest orders to 3.7 percent in the Pacific Northwest order. Sales of fluid milk products through military installations remained steady at 1.0 percent. (See table 7.)

- (15) This is the fifth survey in which information was collected for some of the outlets that have been included in all other wholesale outlets, namely superstores/hypermarkets and warehouse stores/wholesale clubs. Sales of fluid milk products through superstores/hypermarkets accounted for 9.7 percent of total sales, down 0.5 percentage points from 2005. The Southeast order had the highest market share at 21.1 percent, an increase of 6.4 percentage points. The market share of warehouse stores/wholesale clubs was 5.3 percent, up 0.6 percentage points from 2005. (See table 9)



**Table 1—Percentage of Total Fluid Milk Products Sold by Type of Container, by Handlers Regulated Under Federal Milk Orders, November of Selected Years, 1963-2007 <sup>1/</sup>**

Year	Type of container				
	Glass	Paper	Plastic	Other <sup>2/</sup>	Total
	Percent				
1963	32	63	<sup>3/</sup>	5	100
1967	20	71	8	1	100
1977	1	58	41	<sup>4/</sup>	100
1987	<sup>4/</sup>	33	67	<sup>4/</sup>	100
1997	<sup>4/</sup>	21	79	<sup>4/</sup>	100
1999	<sup>4/</sup>	19	81	0	100
2001	<sup>4/</sup>	17	82	0	100
2003	<sup>4/</sup>	16	84	0	100
2005	<sup>4/</sup>	15	85	0	100
2007	<sup>4/</sup>	15	85	0	100

<sup>1/</sup> The figures in the table are based on the total sales volume in all orders combined. See Appendix Table 1 for the applicable sales volume and fluid milk products included.

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

<sup>3/</sup> Data were reported as “Other.”

<sup>4/</sup> Less than 0.5 percent.

**Table 2--Percentage of Total Fluid Milk Products Sold by Size of Container, by Handlers Regulated Under Federal Milk Orders, November of Selected Years, 1963-2007 1/**

Year	Size of container							
	Gallon	Half-gallon	Quart	Pint	Half-pint	Over 10 quarts	Other	Total
	Percent							
1963	13	56	15	1	9	5 <u>2/</u>	1	100
1967	19	53	9	1	11	5	2	100
1977	49	29	6	1	11	3	1	100
1987	60	21	5	2	10	2	<u>3/</u>	100
1997	66	18	4	2	9	1	<u>3/</u>	100
1999	65	18	4	2	10	1	<u>3/</u>	100
2001	65	18	4	2	9	1	1	100
2003	65	18	4	2	9	1	1	100
2005	65	18	3	2	10	1	1	100
2007	65	18	3	2	11	1	1	100

1/ The figures in the table are based on the total sales volume in all orders combined. See Appendix Table 1 for the applicable sales volume and fluid milk products included.

2/ Includes "5-10 quart" containers.

3/ Less than 0.5 percent.

**Table 3--Percentage of Individual and Total Fluid Milk Products Sold by Size and Type of Container, by Handlers Regulated Under Federal Milk Orders, November 2007 <sup>1/</sup>**

Size of container <sup>2/</sup>	Type of container			
	Glass	Paper	Plastic	Total of all types
	Percent			
	<u>Whole milk</u>			
Gallon		<u>3/</u>	74.0	74.0
Half-gallon	0.1	3.2	14.3	17.6
Quart	<u>4/</u>	1.3	1.5	2.8
Pint	<u>3/</u>	0.1	0.5	0.6
Half-pint	<u>3/</u>	2.6	0.1	2.7
6-Gallon			0.1	0.1
5-Gallon			0.7	0.7
Other	<u>4/</u>	0.1	0.5	0.6
14 Ounce			0.1	0.1
13.5 Ounce				
12 Ounce			<u>4/</u>	<u>4/</u>
10 Ounce			<u>4/</u>	<u>4/</u>
Round Pint			0.7	0.7
Round Half-pint			0.1	0.1
Round Other			<u>4/</u>	<u>4/</u>
Total of all sizes	0.1	7.2	92.6	100.0

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**Table 3--Percentage of Individual and Total Fluid Milk Products Sold by Size and Type of Container, by Handlers Regulated Under Federal Milk Orders, November 2007 1--continued**

Size of container <u>2</u> /	Type of container			
	Glass	Paper	Plastic	Total of all types
	Percent			
	<u>Flavored whole milk</u>			
Gallon			3.0	3.0
Half-gallon	0.4	2.1	23.9	26.4
Quart	0.5	3.7	10.8	15.0
Pint	<u>3</u> /	1.7	11.8	13.5
Half-pint	<u>3</u> /	4.4	0.1	4.6
6-Gallon			<u>3</u> /	<u>3</u> /
5-Gallon			0.7	0.7
Other	<u>4</u> /	<u>4</u> /	0.3	0.4
14 Ounce			3.7	3.7
13.5 Ounce			0.1	0.1
12 Ounce			1.8	1.8
10 Ounce			0.8	0.8
Round Pint			28.5	28.5
Round Half-pint			0.7	0.7
Round Other			0.7	0.7
Total of all sizes	1.0	12.0	87.1	100.0

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**Table 3--Percentage of Individual and Total Fluid Milk Products Sold by Size and Type of Container, by Handlers Regulated Under Federal Milk Orders, November 2007 1--continued**

Size of container <u>2</u> /	Type of container			
	Glass	Paper	Plastic	Total of all types
	Percent			
	<u>Eggnog</u>			
Gallon			2.9	2.9
Half-gallon	<u>3</u> /	23.1	26.8	49.9
Quart	0.7	31.7	11.3	43.7
Pint	<u>3</u> /	0.3	0.8	1.1
Half-pint				
6-Gallon				
5-Gallon			<u>3</u> /	<u>3</u> /
Other	<u>4</u> /	0.5	0.1	0.6
14 Ounce			0.2	0.2
13.5 Ounce				
12 Ounce			<u>3</u> /	<u>3</u> /
10 Ounce				
Round Pint			1.4	1.4
Round Half-pint			<u>3</u> /	<u>3</u> /
Round Other			0.2	0.2
Total of all sizes	0.7	55.5	43.7	100.0

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**Table 3--Percentage of Individual and Total Fluid Milk Products Sold by Size and Type of Container, by Handlers Regulated Under Federal Milk Orders, November 2007 1--continued**

Size of container <u>2</u> /	Type of container			
	Glass	Paper	Plastic	Total of all types
	Percent			
	<u>Reduced fat (2%) milk</u>			
Gallon		<u>3</u> /	74.9	74.9
Half-gallon	0.2	2.9	12.5	15.5
Quart	<u>4</u> /	0.7	0.8	1.5
Pint	<u>3</u> /	0.1	0.1	0.2
Half-pint	<u>3</u> /	4.9	0.4	5.3
6-Gallon			<u>4</u> /	<u>4</u> /
5-Gallon			1.0	1.0
Other	<u>4</u> /	0.1	0.7	0.8
14 Ounce			<u>4</u> /	<u>4</u> /
13.5 Ounce				
12 Ounce			0.1	0.1
10 Ounce			<u>4</u> /	<u>4</u> /
Round Pint			0.5	0.5
Round Half-pint			0.2	0.2
Round Other			0.1	0.1
Total of all sizes	0.2	8.7	91.1	100.0

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**Table 3--Percentage of Individual and Total Fluid Milk Products Sold by Size and Type of Container, by Handlers Regulated Under Federal Milk Orders, November 2007 1--continued**

Size of container <u>2</u> /	Type of container			
	Glass	Paper	Plastic	Total of all types
	Percent			
	<u>Low fat (1%) milk</u>			
Gallon			63.9	63.9
Half-gallon	0.2	5.6	13.2	18.9
Quart	<u>4</u> /	0.8	0.6	1.5
Pint		<u>3</u> /	<u>4</u> /	<u>4</u> /
Half-pint	<u>3</u> /	12.5	0.7	13.2
6-Gallon			<u>4</u> /	<u>4</u> /
5-Gallon			0.3	0.3
Other	<u>4</u> /	<u>4</u> /	0.4	0.4
14 Ounce			0.1	0.1
13.5 Ounce				
12 Ounce			<u>3</u> /	<u>3</u> /
10 Ounce			0.1	0.1
Round Pint			<u>4</u> /	<u>4</u> /
Round Half-pint			1.5	1.5
Round Other			0.1	0.1
Total of all sizes	0.2	18.8	81.0	100.0

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**Table 3--Percentage of Individual and Total Fluid Milk Products Sold by Size and Type of Container, by Handlers Regulated Under Federal Milk Orders, November 2007 1--continued**

Size of container <u>2</u> /	Type of container			
	Glass	Paper	Plastic	Total of all types
	Percent			
	<u>Fat-free (skim) milk</u>			
Gallon		<u>3</u> /	68.7	68.7
Half-gallon	0.5	7.4	13.9	21.7
Quart	<u>4</u> /	1.5	1.1	2.6
Pint	<u>3</u> /	<u>4</u> /	<u>4</u> /	<u>4</u> /
Half-pint	<u>3</u> /	4.2	0.2	4.3
6-Gallon			<u>4</u> /	<u>4</u> /
5-Gallon			0.9	0.9
Other	<u>4</u> /	0.3	1.0	1.2
14 Ounce			<u>4</u> /	<u>4</u> /
13.5 Ounce				
12 Ounce			0.1	0.1
10 Ounce			<u>4</u> /	<u>4</u> /
Round Pint			0.2	0.2
Round Half-pint			0.2	0.2
Round Other			0.1	0.1
Total of all sizes	0.5	13.3	86.2	100.0

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**Table 3--Percentage of Individual and Total Fluid Milk Products Sold by Size and Type of Container, by Handlers Regulated Under Federal Milk Orders, November 2007 1--continued**

Size of container <u>2</u> /	Type of container			
	Glass	Paper	Plastic	Total of all types
	Percent			
	<u>Flavored fat-reduced milk</u>			
Gallon			9.3	9.3
Half-gallon	<u>3</u> /	2.7	5.6	8.3
Quart	<u>4</u> /	0.7	1.9	2.5
Pint		0.4	0.4	0.8
Half-pint	<u>3</u> /	57.0	6.1	63.1
6-Gallon			<u>3</u> /	<u>3</u> /
5-Gallon			1.3	1.3
Other	0.2	<u>4</u> /	0.2	0.5
14 Ounce			0.7	0.7
13.5 Ounce			0.7	0.7
12 Ounce			0.7	0.7
10 Ounce			0.4	0.4
Round Pint			4.5	4.5
Round Half-pint			6.6	6.6
Round Other			0.6	0.6
Total of all sizes	0.2	60.9	38.9	100.0

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**Table 3--Percentage of Individual and Total Fluid Milk Products Sold by Size and Type of Container, by Handlers Regulated Under Federal Milk Orders, November 2007 1--continued**

Size of container <u>2</u> /	Type of container			
	Glass	Paper	Plastic	Total of all types
	Percent			
	<u>Buttermilk</u>			
Gallon			7.4	7.4
Half-gallon	<u>3</u> /	12.7	47.0	59.7
Quart	<u>4</u> /	16.0	12.0	28.0
Pint		1.1	0.4	1.6
Half-pint		1.8	<u>3</u> /	1.8
6-Gallon				
5-Gallon			0.5	0.5
Other	<u>4</u> /	<u>4</u> /	0.3	0.3
14 Ounce				
13.5 Ounce				
12 Ounce				
10 Ounce				
Round Pint			0.7	0.7
Round Half-pint			<u>4</u> /	<u>4</u> /
Round Other			0.1	0.1
Total of all sizes	<u>4</u> /	31.7	68.3	100.0

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**Table 3--Percentage of Individual and Total Fluid Milk Products Sold by Size and Type of Container, by Handlers Regulated Under Federal Milk Orders, November 2007 1--continued**

Size of container <u>2</u> /	Type of container			
	Glass	Paper	Plastic	Total of all types
	Percent			
	<u>Total fluid milk products</u>			
Gallon		<u>3</u> /	64.7	64.7
Half-gallon	0.2	4.4	13.4	18.0
Quart	<u>4</u> /	1.6	1.5	3.2
Pint	<u>3</u> /	0.1	0.4	0.5
Half-pint	<u>3</u> /	8.9	0.7	9.7
6-Gallon			<u>4</u> /	<u>4</u> /
5-Gallon			0.8	0.8
Other	<u>4</u> /	0.1	0.6	0.8
14 Ounce			0.1	0.1
13.5 Ounce			0.1	0.1
12 Ounce			0.1	0.1
10 Ounce			0.1	0.1
Round Pint			1.1	1.1
Round Half-pint			0.8	0.8
Round Other			0.1	0.1
Total of all sizes	0.2	15.2	84.5	100.0

1/ The figures in the table are based on the total sales volume for the product in all orders combined. See Appendix Table 1 for applicable sales volume. Totals may not add due to rounding.

2/ Five-gallon and six-gallon containers listed under plastic are mostly bag-in-box units.

3/ Data are restricted; pertains to the operations of fewer than three handlers. Data are included in "Other."

4/ Less than 0.05 percent.

**Table 4--Percentage of Total Fluid Milk Products Sold by Size and Type of Container, by Handlers Regulated Under Federal Milk Orders, by Order, November 2007 1/**

Size of container <u>2/</u>	Type of container			
	Glass	Paper	Plastic	Total of all types
	Percent			
	<u>Appalachian</u>			
Gallon			70.7	70.7
Half-gallon	<u>3/</u>	<u>3/</u>	14.4	14.4
Quart	<u>3/</u>	<u>3/</u>	1.4	1.4
Pint		<u>3/</u>	1.4	1.4
Half-pint		11.0	0.1	11.1
6-Gallon				
5-Gallon				
Other		0.7	0.3	1.0
Total of all sizes	<u>3/</u>	11.7	88.3	100.0
	<u>Arizona</u>			
Gallon			76.3	76.3
Half-gallon		1.4	7.8	9.2
Quart		<u>4/</u>	2.6	2.6
Pint		<u>4/</u>	<u>4/</u>	<u>4/</u>
Half-pint		<u>4/</u>	<u>4/</u>	<u>4/</u>
6-Gallon				
5-Gallon			<u>4/</u>	<u>4/</u>
Other		7.1	4.7	11.9
Total of all sizes		8.5	91.5	100.0
	<u>Central</u>			
Gallon			69.3	69.3
Half-gallon	<u>3/</u>	2.6	12.1	14.6
Quart	<u>3/</u>	1.8	0.3	2.1
Pint	<u>3/</u>	0.1	1.5	1.6
Half-pint		9.9	0.8	10.7
6-Gallon				
5-Gallon			1.4	1.4
Other		0.1	0.2	0.2
Total of all sizes	<u>3/</u>	14.4	85.6	100.0

CONTINUED

**Table 4--Percentage of Total Fluid Milk Products Sold by Size and Type of Container, by Handlers Regulated Under Federal Milk Orders, by Order, November 2007 1--continued**

Size of container <u>2</u> /	Type of container			
	Glass	Paper	Plastic	Total of all types
	Percent			
	<u>Florida</u>			
Gallon		<u>4</u> /	66.5	66.5
Half-gallon		<u>4</u> /	18.2	18.2
Quart		<u>4</u> /	2.0	2.0
Pint		<u>4</u> /	1.5	1.5
Half-pint		6.8	4.2	11.0
6-Gallon				
5-Gallon			<u>5</u> /	<u>5</u> /
Other		0.3	0.5	0.8
Total of all sizes		7.0	93.0	100.0
	<u>Mideast</u>			
Gallon			70.1	70.1
Half-gallon	<u>3</u> /	0.9	13.6	14.5
Quart	<u>3</u> /	1.3	1.0	2.4
Pint		0.1	1.5	1.6
Half-pint		8.7	1.3	10.0
6-Gallon				
5-Gallon			1.0	1.0
Other		0.2	0.2	0.4
Total of all sizes	<u>3</u> /	11.2	88.8	100.0
	<u>Northeast</u>			
Gallon			52.9	52.9
Half-gallon	0.2	11.3	15.7	27.2
Quart	0.1	4.1	2.2	6.4
Pint	<u>3</u> /	0.2	1.4	1.6
Half-pint	<u>3</u> /	7.4	1.2	8.6
6-Gallon			0.1	0.1
5-Gallon			1.0	1.0
Other	<u>3</u> /	0.3	1.9	2.2
Total of all sizes	0.3	23.2	76.5	100.0

CONTINUED

**Table 4--Percentage of Total Fluid Milk Products Sold by Size and Type of Container, by Handlers Regulated Under Federal Milk Orders, by Order, November 2007 1--continued**

Size of container <u>2</u> /	Type of container			
	Glass	Paper	Plastic	Total of all types
	Percent			
	<u>Pacific Northwest</u>			
Gallon			65.9	65.9
Half-gallon		10.9	6.3	17.2
Quart		2.2	<u>4</u> /	2.2
Pint		0.9	1.0	1.9
Half-pint		5.5	<u>4</u> /	5.5
6-Gallon				
5-Gallon			0.5	0.5
Other		<u>5</u> /	6.8	6.8
Total of all sizes		19.5	80.5	100.0
	<u>Southeast</u>			
Gallon			65.7	65.7
Half-gallon		0.8	13.9	14.7
Quart		0.6	1.6	2.2
Pint		<u>6</u> /	2.2	2.2
Half-pint		11.8	3.2	14.9
6-Gallon				
5-Gallon			0.3	0.3
Other			0.1	0.1
Total of all sizes		13.1	86.9	100.0
	<u>Southwest</u>			
Gallon			65.6	65.6
Half-gallon		2.5	13.1	15.7
Quart	<u>3</u> /	0.7	1.1	1.8
Pint		<u>5</u> /	2.2	2.3
Half-pint		10.9	2.5	13.3
6-Gallon				
5-Gallon			0.7	0.7
Other	<u>3</u> /	<u>5</u> /	0.7	0.7
Total of all sizes	<u>3</u> /	14.1	85.9	100.0

CONTINUED

**Table 4--Percentage of Total Fluid Milk Products Sold by Size and Type of Container, by Handlers Regulated Under Federal Milk Orders, by Order, November 2007 1--continued**

Size of container <u>2</u> /	Type of container			
	Glass	Paper	Plastic	Total of all types
	Percent			
	<u>Upper Midwest</u>			
Gallon			67.8	67.8
Half-gallon	1.2	3.8	10.5	15.5
Quart	<u>3</u> /	0.8	1.9	2.6
Pint		0.1	1.0	1.0
Half-pint	<u>3</u> /	9.5	1.1	10.6
6-Gallon				
5-Gallon			1.3	1.3
Other		0.1	1.0	1.1
Total of all sizes	1.2	14.3	84.6	100.0

1/ The figures in the table are based on the total sales volume for the milk order. See Appendix Table 1 for applicable sales volume and fluid milk products included. Totals may not add due to rounding. 2/ 5-gallon and 6-gallon containers listed under plastic are mostly bag-in-box units. Pint, half-pint, and "other" size containers include data for single-serve round plastic containers which are shown separately in Table 5. 3/ Data are restricted; pertains to the operations of fewer than three handlers. Data are included in "Other-Paper." For those markets in which glass data are restricted, the average percent share is 0.3%. 4/ Data are restricted and are included in "Other." 5/ Less than 0.05 percent. 6/ Data are restricted and are included in "Other-Plastic."

**Table 5--Percentage of Total Fluid Milk Products Sold in Single-Serve Round Plastic Containers, by Handlers Regulated Under Federal Milk Orders, by Order, November 2007 <sup>1/</sup>**

Federal milk Order	Size of single-serve round plastic container							
	14 Ounce	13.5 Ounce	12 Ounce	10 Ounce	Pint	Half-pint	Other	Total
	Percent							
Appalachian	0.3	0	0	0	1.4	0.1	0	1.8
Arizona	0	0	<u>2/</u>	0	0	<u>2/</u>	<u>2/</u>	<u>2/</u>
Central	<u>3/</u>	<u>3/</u>	<u>2/</u>	<u>2/</u>	1.4	0.5	0	2.1
Florida	0	0	0	0	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
Midwest	<u>3/</u>	<u>3/</u>	<u>2/</u>	0	1.4	1.3	0.2	2.9
Northeast	0.4	0.1	<u>3/</u>	0.2	1.4	1.2	0.1	3.4
Pacific Northwest	0	0	0	<u>3/</u>	0.9	<u>2/</u>	<u>2/</u>	1.2
Southeast	<u>3/</u>	0	<u>2/</u>	<u>2/</u>	0	0	<u>2/</u>	0.1
Southwest	<u>3/</u>	0.4	0.1	0	2.0	1.5	0.2	4.2
Upper Midwest	<u>3/</u>	<u>2/</u>	0.3	<u>2/</u>	1.0	1.1	0.2	2.7
All orders combined	0.1	0.1	0.1	0.1	1.1	0.8	0.1	2.4

<sup>1/</sup> The figures in the table are based on the total sales volume for the milk order. See Appendix Table 1 for applicable sales volume and fluid milk products included. Totals may not add due to rounding.

<sup>2/</sup> Data are restricted; pertains to the operations of fewer than three handlers. Data are included in "Total".

<sup>3/</sup> Less than 0.05 percent.



**Table 6--Percentage of Total Fluid Milk Products Sold by Method of Distribution and Type of Wholesale Outlet, by Handlers Regulated Under Federal Milk Orders, November of Selected Years, 1963 to 2007**

Year	Method of distribution <u>2/</u>						
	Home-delivery	Total wholesale	Type of wholesale outlet <u>3/</u>				
			Food chain stores		Institutional		All other
			Supermarket	Dairy and convenience	Military	Schools	
			Percent				
1963	29.7	70.3	---	---	---	---	---
1967	23.1	76.9	---	---	---	---	---
1977	5.3	94.7	42.9	10.0	1.7 <u>4/</u>	7.7 <u>4/</u>	32.8
1987	1.2	98.8	51.2	10.6	1.4	7.1	28.5
1997	0.5	99.5	57.6	10.2	0.9	6.3	24.4
1999	0.5	99.5	57.0	9.5	0.8	6.8	25.4
2001	0.4	99.6	53.5	10.0	0.9	7.0	28.3
2003	0.4	99.6	49.6	10.5	0.9	6.4	32.3
2005	0.4	99.6	48.1	9.1	1.0	6.1	35.2
2007	0.3	99.7	47.0	8.5	1.0	6.9	36.2

1/ The figures in the table are based on the total sales volume in all orders combined. See Appendix Table 1 for the applicable sales volume and fluid milk products included.

2/ See the "Definitions" section in the Appendix for the description of the various methods of distribution.

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

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

**Table 7--Percentage of Total Fluid Milk Products Sold by Method of Distribution and Type of Wholesale Outlet, by Handlers Regulated Under Federal Milk Orders, by Order, November 2007 <sup>1/</sup>**

Federal milk order	Method of distribution <u>2/</u>								
	Home-delivery	Total wholesale	Type of wholesale outlet						
			Food chain stores			Institutional			All other
			Total	Supermarkets	Dairy and convenience	Total	Military	Schools	
Percent									
Appalachian	<u>3/</u>	100.0	55.2	47.3	7.9	6.8	0.5	6.3	38.0
Arizona	0	100.0	<u>4/</u>	<u>4/</u>	<u>4/</u>	<u>4/</u>	<u>4/</u>	<u>4/</u>	38.8
Central	<u>3/</u>	100.0	55.2	49.5	5.7	9.1	0.7	8.3	35.7
Florida	0	100.0	61.5	57.6	3.9	8.1	2.2	5.8	30.5
Mideast	<u>3/</u>	100.0	47.5	40.2	7.3	6.3	0.1	6.1	46.2
Northeast	0.4	99.6	67.2	51.4	15.8	6.7	1.6	5.1	25.8
Pacific Northwest	<u>3/</u>	100.0	62.6	50.9	11.6	4.7	1.0	3.7	32.8
Southeast	<u>3/</u>	100.0	46.7	40.3	6.5	11.9	1.9	10.1	41.3
Southwest	0	100.0	55.7	51.3	4.4	11.6	1.5	10.1	32.7
Upper Midwest	0.7	99.3	42.1	37.3	4.8	7.7	<u>5/</u>	7.6	49.6
All orders combined	0.3	99.7	55.6	47.0	8.5	7.9	1.0	6.9	36.2

<sup>1/</sup> The figures in the table are based on the total sales volume for the milk order. See Appendix Table 1 for applicable sales volume and fluid milk products included. Totals may not add due to rounding.

<sup>2/</sup> See the "Definitions" section in the Appendix for the description of the various methods of distribution.

<sup>3/</sup> Data are restricted; pertains to the operations of fewer than three handlers. Data are included in "All other wholesale."

<sup>4/</sup> Data are restricted for all food chain store and institutional outlets; pertains to the operations of fewer than three handlers.

<sup>5/</sup> Less than 0.05 percent.

**Table 8--Percentage of Total Fluid Milk Products Sold by Type of Food Chain Store, by Handlers Regulated Under Federal Milk Orders, by Order, November 2007 1/**

Federal milk order	Type of food chain store <u>2/</u>					
	Total food chain stores	Supermarket		Dairy/convenience		Total vertically integrated
		Vertically integrated	Other	Vertically integrated	Other	
	Percent					
Appalachian	55.2	18.8	28.5	<u>3/</u>	7.9	18.8
Arizona	<u>4/</u>	<u>4/</u>	<u>4/</u>	<u>4/</u>	<u>4/</u>	<u>4/</u>
Central	55.2	15.8	33.7	0.5	5.2	16.2
Florida	61.5	57.6	0	3.9	0	61.5
Mideast	47.5	12.9	27.2	0.9	6.5	13.8
Northeast	67.2	7.1	44.3	7.9	7.9	15.0
Pacific Northwest	62.6	<u>3/</u>	50.9	<u>3/</u>	11.6	<u>3/</u>
Southeast	46.7	40.3	0	6.5	0	46.7
Southwest	55.7	28.9	22.4	0	4.4	28.9
Upper Midwest	42.1	0	37.3	<u>3/</u>	4.8	<u>3/</u>
All orders combined	55.6	19.3	27.7	3.4	5.1	22.8

1/ The figures in the table are based on the total sales volume for the milk order. See Appendix Table 1 for applicable sales volume and fluid milk products included. Totals may not add due to rounding.

2/ See the “Definitions” section in the Appendix for the description of the types of food chain stores.

3/ Data are restricted; pertains to the operations of fewer than three handlers. Data are included in applicable “Other”. “All orders combined” includes restricted data.

4/ Data are restricted for all types of food chain stores; pertains to the operations of fewer than three handlers. “All orders combined” includes restricted data.

**Table 9--Percentage of Total Fluid Milk Products Sold by Type of All Other Wholesale Outlets, by Handlers Regulated Under Federal Milk Orders, by Order, November 2007 1/**

Federal milk order	Type of all other wholesale outlets <u>2/</u>			
	Total all other	Superstores/hypermarkets	Warehouse stores/wholesale clubs	Other
	Percent			
Appalachian <u>3/</u>	38.0	9.4	11.7	16.9
Arizona	38.8	<u>4/</u>	9.6	29.1
Central <u>3/</u>	35.7	16.7	2.8	16.2
Florida	30.5	7.2	7.5	15.8
Mideast <u>3/</u>	46.2	15.4	4.5	26.4
Northeast	25.8	1.4	2.7	21.7
Pacific Northwest <u>3/</u>	32.8	9.9	3.0	19.9
Southeast <u>3/</u>	41.3	21.1	3.3	16.9
Southwest	32.7	6.8	9.3	16.6
Upper Midwest	49.6	7.5	5.8	36.3
All orders combined	36.2	9.7	5.3	21.2

1/ The figures in the table are based on the total sales volume for the milk order. See Appendix Table 1 for applicable sales volume and fluid milk products included. Totals may not add due to rounding.

2/ See the “Definitions” section in the Appendix of the types of all other wholesale outlets.

3/ “Total all other” and “Other” includes data for home-delivery which were restricted.

4/ Data are restricted; pertains to the operations of fewer than three handlers. Data are included in “Other.” “All orders combined” includes restricted data.

## APPENDIX

### 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 wax-coated and plastic-coated containers, and foil-lined UHT containers. Plastic includes rigid blow mold or thermoformed containers, single-serve round (milk bottle shaped) containers, plastic-lined boxes (polyethylene bag in corrugated paper box or in rigid plastic case), and plastic bags sold separately. Containers larger than one gallon in the plastic category, for the most part, are bag-in-box containers.

**Size of Container:** Container sizes surveyed are: gallon, half-gallon, quart, pint, half-pint, 6-gallon, 5-gallon, 14 ounce, 13.5 ounce, 12 ounce, 10 ounce, round pint, round half-pint, round other, and other. Containers banded together, or containers put into larger bags, sacs, etc., are reported separately. Examples: 1/2 –gallon twin packs are reported as two ½ gallons; four 1-quart bags in a larger bag are reported as four quart units, not as a gallon; six-packs of half pints are reported as six half pints, etc.

**Method of Distribution:** Sales are divided into home-delivery and wholesale. Home-delivery includes quantities delivered to homes or sold to others for delivery to homes. Wholesale includes quantities distributed through all other methods. Wholesale is broken down into food chain stores, institutional outlets, and all other.

Food chain stores are defined as 11 or more stores, primarily engaged in food retailing, and either being under common management, being franchised by a common company, or belonging to a common purchasing association. Food chain stores are categorized into supermarket or dairy/convenience stores. Also identified are vertically integrated chain stores. Vertically integrated includes those chain stores which have integrated backwards into fluid milk processing, and fluid milk processing plants which have integrated forward into chain store ownership. Also included are franchise organizations in which the franchiser also owns a dairy plant that services the franchisee's store and associations of independent food store owners which jointly own a dairy plant that services their stores.

Institutional outlets are military installations and schools which includes public schools (elementary and high school), colleges, and universities. All other wholesale is broken down into superstores/hypermarkets, warehouse stores/wholesale clubs, and other. Superstores/hypermarkets are general merchandise stores that include a full-line supermarket. Other includes nonchain food stores, nonfood stores (drug stores, gasoline stations, etc.), restaurants, hotels, hospitals, nursing homes, vending machines, and any other type of wholesale outlet.

**Appendix Table 1--Volume of Fluid Milk Products Sold by Handlers Regulated Under Federal Milk Orders  
in November of Selected Years**

Fluid milk product	Sales in November 2007 <u>1/</u>	Federal milk order	Sales in November 2007 <u>2/</u>	Year	Sales in November <u>3/</u>
	1,000 pounds		1,000 pounds		1,000 Pounds
Whole milk	1,058,848	Appalachian	346,364	1963	1,662,174
Flavored whole milk	49,203	Arizona	118,986	1967	2,297,632
Eggnog	59,569	Central	374,549	1977	3,473,912
Reduced fat (2%) milk	1,299,325	Florida	223,854	1987	3,500,266
Low fat (1%) milk	476,422	Mideast	553,181	1997	3,651,023
Fat-free (skim) milk	595,542	Northeast	921,959	1999	3,724,179
Flavored fat-reduced milk	297,551	Pacific Northwest	191,928	2001	3,917,452
Buttermilk	36,153	Southeast	406,064	2003	3,760,797
Total fluid milk products	3,872,612	Southwest	360,804	2005	3,760,966
		Upper Midwest	374,923	2007	3,872,612
		All orders combined	3,872,612		

1/ Total sales for all orders combined.

2/ Sales of total fluid milk products by handlers regulated under the order; the outlet to which the milk product is delivered may not be located in the marketing area of the order.

3/ Sales of total fluid milk products for all orders included in the applicable survey.

**Appendix Table 2--Factors for Converting Volumes Sold into Number of Container Units Sold 1/**

Fluid milk product	Conversion factors - pounds per:										
	Gallon	Half-Gallon	Quart	Pint	Half-pint	6-Gallon	5-Gallon	14 Oz.	13.5 Oz.	12 Oz.	10 Oz.
Whole milk	8.60	4.300	2.1500	1.0750	.5375	51.60	43.00	.9406	.9070	.8063	.6719
Flavored whole milk	8.00	4.000	2.0000	1.0000	.5000	48.00	40.00	.8750	.8438	.7500	.6250
Eggnog	9.00	4.500	2.2500	1.1250	.5625	54.00	45.00	.9844	.9492	.8438	.7031
Reduced fat (2%) milk	8.62	4.310	2.1550	1.0775	.5388	51.72	43.10	.9428	.9091	.8081	.6734
Low fat (1%) milk	8.62	4.310	2.1550	1.0775	.5388	51.72	43.10	.9428	.9091	.8081	.6734
Fat-free (skim) milk	8.63	4.315	2.1575	1.0788	.5394	51.78	43.15	.9439	.9102	.8091	.6742
Flavored fat-reduced milk	8.00	4.000	2.0000	1.0000	.5000	48.00	40.00	.8750	.8438	.7500	.6250
Buttermilk	8.62	4.310	2.1550	1.0775	.5388	51.72	43.10	.9428	.9091	.8081	.6734

1/ Conversion process—compute volume sold in the particular size container by multiplying the percentage in the table by the applicable volume in Appendix Table 1; then divide volume by applicable factor in this table to determine the number of container units.