



United States
Department of
Agriculture

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 2001

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 2001. Its purpose was to update a similar survey in November 1999, and to see if trends observed in past surveys are continuing. Data were obtained from milk handlers regulated under the 11 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-second report in a series. Similar data have been distributed based on surveys made in November 1963 through 1967, 1969, and every other year through 1999.

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Issued December 2002

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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 increased, continuing the long-term trend in evidence since this survey was first taken in 1963. The 1.4 percentage point increase pushed the market share of plastic to 82.4 percent. Sales of fluid milk in paper containers accounted for 17.4 percent of total sales, while glass containers accounted for 0.2 percent of total sales. (See table 1.)
- (2) The proportion of total fluid milk products sold in plastic increased for nearly all container sizes of a gallon size or smaller. While the market shares of the smaller than half-gallon plastic containers are relatively small, the increases in these shares from November 1999 are notable. The volume of fluid milk products sold in plastic pints increased by more than 50 percent from November 1999. The single-serve, round (milk bottle shaped) container likely contributed largely to these increases. The market share in larger plastic sizes also increased; quarts by more than one-third, while half-gallons increased to 12.4 percent of total sales. (See table 3.)
- (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 73.8 percent in the Northeast order to 90.4 percent in the Florida order. Glass containers were used in 6 of the 11 orders, but accounted for 1 percent or less of total sales in each order. (See table 4.)
- (4) Plastic containers accounted for more than 80 percent or more of the sales of whole milk, reduced fat (2%) milk, low fat (1%) milk, and fat-free (skim) milk. Conversely, about 71 percent of the sales of flavored fat-reduced milk were sold in paper containers. The market share for flavored whole milk sold in plastic increased by more than 14 percentage points to 72.4 percent. (See table 3.)
- (5) The market share of total fluid milk products sold in gallons increased to 65.1 percent, re-establishing the long term trend over the time period covered by the surveys. Conversely, the market share of half-gallon containers decreased to 17.6 percent. About 9.5 percent of total sales were made in half-pint containers, down about 0.6 percentage points from the previous survey. Fluid milk products sold in quart and pint and containers increased slightly. (See tables 2 and 3.)
- (6) For nearly all container sizes, plastic accounted for larger proportions of total sales. While plastics' share of gallons remained at 99.9 percent, plastics' share of half-gallons increased nearly 3 percentage points to 70.1 percent. For pint containers, the share sold in plastic was 22 percentage points higher at 81.3 percent; the single-serve, round (milk bottle shaped) container likely contributed largely to this increase. The plastic share of quarts increased slightly to 30.3

percentage points, and for “other” sizes increased significantly to 46.9 percentage points at market share. (See table 3.)

- (7) In all regions of the country, 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 54.2 percent in the Northeast order to 73.6 percent in the combined Arizona-Las Vegas/Western area. The proportion of fluid milk products sold in half-pint containers was notably larger in the Southeast and Southwest. In the Northeast, quarts accounted for nearly twice the all market average. (See table 4.)
- (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, nearly 60 percent of the sales of flavored whole milk and over 72 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. Much more buttermilk was sold in half-gallon containers than in other sizes. Eggnog, which was surveyed for the first time, had over 90 percent of its sales in half-gallon and quart containers. (See table 3.)
- (9) Single-serve, plastic containers accounted for 1.7 percent of total fluid milk product sales. On a regional basis, single-serve round containers ranged from 2.4 percent of total fluid milk product sales in the Southwest to 0.4 percent in the Florida order. More than 36 percent of flavored whole milk sales were made in these round containers as compared to 0.2 percent of skim milk sales. Pints accounted for 70 percent of the sales of this type of container, half-pints about 18 percent, and other sizes about 12 percent. Of the total sales of fluid milk products in plastic pints and half-pints, 71 and 59 percent, respectively, were in these single-serve round plastic containers. (See tables 3 and 5.)
- (10) The proportion of fluid milk products sold through wholesale outlets moved up slightly to 99.6 percent. The remaining 0.4 percent was home-delivered. (See table 6.)
- (11) The most important wholesale outlet continues to be food chain stores, which accounted for more than 63 percent of total fluid milk sales. However, the market share of this wholesale distribution method did drop 3.1 percentage points in the current survey. Fluid milk sales through institutional outlets (military and schools) totaled 7.9 percent of total sales, up moderately from 1999. Sales through all other wholesale outlets accounted for 28.3 percent of total sales, up 2.9 percentage points from 1999, largely as a result of sales in warehouse stores and wholesale clubs. (See table 6.)
- (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 53.4 percent of total sales, down about 3.6 percentage points from 1999. On a regional basis, the supermarkets market share ranged from 48.1 percent in the Southeast order to 62.7 percent in the Southwest order. Sales of fluid milk products through dairy/convenience stores accounted for 10.0 percent of total sales, up 0.5 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 22.3 percent, up from 18.8 percent in 1999, and the highest market share since this distribution method was first measured over 30 years ago. Sales by vertically integrated supermarket chains also showed the highest market share ever of 20.0 percent of total sales, while dairy/convenience store chains accounted for 2.3 percent. Vertical integration of food chains showed significant regional variation. In the Florida order, over 56 percent of total fluid milk sales were made by vertically integrated food chains. There was virtually no vertical integration in the Upper Midwest order. Vertically integrated supermarket chains accounted for over 89 percent of food chain store vertical integration and also showed significant regional variation. The market share of vertically integrated dairy/convenience chains in the Southeast was 4.8 percent, over twice the national average of 2.3 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 7.0 percent, 0.2 percentage points above 1999. On a regional basis, the market share of schools ranged from 8.8 percent in the Southeast order to 3.6 percent in the Florida order. Sales of fluid milk products through military installations totaled 0.9 percent. (See table 7.)
- (15) This is the second 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 6.5 percent of total sales, up 3.5 percent points from 1999. The Appalachian and Southeast orders had the highest market shares at 15.1 percent and 13.1 percent, respectively. The market share of warehouse stores/wholesale clubs was 2.6 percent, up one percentage point from 1999. The market shares ranged from 9.8 percent in the Florida order to zero in the Appalachian order. (See table 9.)

Sales through these methods may account for the decrease in the food chain stores market share that occurred over the last couple surveys.

Table 1—Percentage of Total Fluid Milk Products Sold by Type of Container, by Handlers Regulated Under Federal Milk Orders, November of Selected Years, 1963-2001 ^{1/}

Year	Type of container				
	Glass	Paper	Plastic	Other ^{2/}	Total
	Percent				
1963	32	63	^{3/}	5	100
1967	20	71	8	1	100
1971	7	78	15	^{4/}	100
1975	2	67	31	^{4/}	100
1979	1	49	50	^{4/}	100
1983	^{4/}	38	62	^{4/}	100
1987	^{4/}	33	67	^{4/}	100
1991	^{4/}	28	72	^{4/}	100
1995	^{4/}	24	76	^{4/}	100
1997	^{4/}	21	79	^{4/}	100
1999	^{4/}	19	81	0	100
2001	^{4/}	17	82	0	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/} Percentages represent metal cans and plastic bag-in-box containers in 1963; metal cans only, 1967 to date.

^{3/} Data were reported as "Other."

^{4/} 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, 1963-2001 ^{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 ^{2/}	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	^{3/}	100
1987	60	21	5	2	10	2	^{3/}	100
1991	64	19	4	1	9	2	^{3/}	100
1995	64	18	4	2	10	2	^{3/}	100
1997	66	18	4	2	9	1	^{3/}	100
1999	65	18	4	2	10	1	^{3/}	100
2001	65	18	4	2	9	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 2001 ^{1/}

Size of container ^{2/}	Type of container			
	Glass	Paper	Plastic	Total of all types
	Percent			
	<u>Whole milk</u>			
Gallon	<u>3/</u>	<u>4/</u>	72.6	72.6
Half-gallon	0.1	3.9	12.6	16.6
Quart	<u>3/</u>	2.1	1.0	3.1
Pint		0.3	0.6	0.9
Half-pint		4.3	0.2	4.6
6-Gallon			0.2	0.2
5-Gallon			0.8	0.8
Other		0.3	0.1	0.1
Round Pint			0.8	0.8
Round Half-pint			0.1	0.1
Round Other			0.1	0.1
Total of all sizes	0.1	10.9	89.0	100.0
	<u>Flavored whole milk</u>			
Gallon			1.4	1.4
Half-gallon	0.1	4.9	11.3	16.4
Quart	0.6	7.5	9.6	17.8
Pint		6.3	10.9	17.2
Half-pint		7.0	0.4	7.4
6-Gallon			0.3	0.3
5-Gallon			0.4	0.4
Other		1.1	0.4	1.5
Round Pint			34.5	34.5
Round Half-pint			0.8	0.8
Round Other			2.2	2.2
Total of all sizes	0.8	26.8	72.4	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 2001 1--continued

Size of container <u>2</u> /	Type of container			
	Glass	Paper	Plastic	Total of all types
	Percent			
	<u>Eggnog</u>			
Gallon		<u>4</u> /	2.1	2.1
Half-gallon		23.8	23.3	47.1
Quart	0.7	32.9	11.8	45.5
Pint		0.7	1.7	2.4
Half-pint		<u>4</u> /		<u>4</u> /
6-Gallon				
5-Gallon				
Other		0.7	0.6	1.4
Round Pint			1.3	1.3
Round Half-pint			0.1	0.1
Round Other			<u>4</u> /	<u>4</u> /
Total of all sizes	0.7	58.2	41.1	100.0
	<u>Reduced fat (2%) milk</u>			
Gallon			74.5	74.5
Half-gallon	<u>3</u> /	3.7	11.0	14.8
Quart	<u>3</u> /	1.3	0.5	1.9
Pint		0.1	0.1	0.2
Half-pint		5.9	0.3	6.1
6-Gallon			0.1	0.1
5-Gallon			1.6	1.6
Other		0.2	0.1	0.3
Round Pint			0.4	0.4
Round Half-pint			0.1	0.1
Round Other			0.1	0.1
Total of all sizes	0.1	11.3	88.7	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 2001 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	<u>4</u>		67.6	67.6
Half-gallon	0.4	6.3	12.6	19.3
Quart		1.7	0.4	2.1
Pint		<u>3</u>	<u>3</u>	0.1
Half-pint		9.4	0.1	9.6
6-Gallon			<u>3</u>	<u>3</u>
5-Gallon			0.5	0.5
Other		0.4	0.1	0.5
Round Pint			0.2	0.2
Round Half-pint			0.1	0.1
Round Other			<u>4</u>	<u>4</u>
Total of all sizes	0.5	17.8	81.7	100.0
	<u>Fat-free (skim) milk</u>			
Gallon			67.8	67.8
Half-gallon	0.4	7.6	14.9	22.8
Quart	<u>3</u>	2.9	0.8	3.8
Pint		<u>3</u>	<u>3</u>	0.1
Half-pint		3.7	0.1	3.8
6-Gallon			0.1	0.1
5-Gallon			0.9	0.9
Other		0.3	0.2	0.5
Round Pint			0.1	0.1
Round Half-pint			0.1	0.1
Round Other			<u>4</u>	<u>4</u>
Total of all sizes	0.4	14.5	85.1	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 2001 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			11.1	11.1
Half-gallon	<u>4</u> /	2.7	5.1	7.9
Quart	<u>4</u> /	1.7	0.9	2.6
Pint		2.0	0.9	2.9
Half-pint	<u>3</u> /	62.7	1.8	64.5
6-Gallon			<u>3</u> /	<u>3</u> /
5-Gallon			1.4	1.4
Other	0.1	3.0	1.1	4.2
Round Pint			2.4	2.4
Round Half-pint			3.0	3.0
Round Other			0.7	0.7
Total of all sizes	0.1	71.5	28.4	100.0
	<u>Buttermilk</u>			
Gallon			8.1	8.1
Half-gallon		26.6	33.4	60.0
Quart	<u>3</u> /	16.1	7.5	23.6
Pint		0.6	<u>4</u> /	0.6
Half-pint		1.6	<u>4</u> /	1.6
6-Gallon			0.1	0.1
5-Gallon			0.6	0.6
Other		<u>5</u> /	5.0	5.0
Round Pint			0.5	0.5
Round Half-pint			<u>3</u> /	<u>3</u> /
Round Other			<u>4</u> /	<u>4</u> /
Total of all sizes	<u>3</u> /	44.9	55.1	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 2001 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> /	<u>4</u> /	65.1	65.1
Half-gallon	0.2	5.1	12.4	17.6
Quart	<u>3</u> /	2.6	1.1	3.7
Pint	<u>3</u> /	0.4	0.5	0.9
Half-pint		8.9	0.3	9.2
6-Gallon			0.1	0.1
5-Gallon			1.0	1.0
Other	<u>3</u> /	0.5	0.2	0.7
Round Pint			1.2	1.2
Round Half-pint			0.3	0.3
Round Other			0.1	0.1
Total of all sizes	0.2	17.4	82.4	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/ Less than 0.05 percent.

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

5/ Data are restricted; pertains to the operations of fewer that three handlers. Data are included in "Total of all Sizes."

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 2001 1/

Size of container <u>2/</u>	Type of container			
	Glass	Paper	Plastic	Total of all types
	Percent			
	<u>Appalachian</u>			
Gallon			70.9	70.9
Half-gallon		0.5	14.1	14.6
Quart		0.6	1.5	2.1
Pint		0.6	1.4	2.0
Half-pint		9.5	0.9	10.4
6-Gallon				
5-Gallon				
Other		<u>4/</u>		<u>4/</u>
Total of all sizes		11.2	88.8	100.0
	<u>Arizona-Las Vegas/Western *</u>			
Gallon			73.6	73.6
Half-gallon		4.6	6.0	10.6
Quart		3.7	1.5	5.2
Pint		0.4	0.8	1.2
Half-pint		7.1	0.2	7.3
6-Gallon				
5-Gallon			0.8	0.8
Other		<u>4/</u>	<u>4/</u>	<u>4/</u>
Total of all sizes		15.8	84.2	100.0
	<u>Central</u>			
Gallon			69.8	69.8
Half-gallon	<u>5/</u>	2.9	10.2	13.2
Quart	<u>5/</u>	2.3	0.1	2.4
Pint		0.9	1.3	2.3
Half-pint		10.2	<u>3/</u>	10.2
6-Gallon				
5-Gallon			1.7	1.7
Other	0.1	0.2	0.1	0.4
Total of all sizes	0.1	16.5	83.4	100.0

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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 2001 1--continued

Size of container <u>2</u> /	Type of container			
	Glass	Paper	Plastic	Total of all types
	Percent			
	<u>Florida</u>			
Gallon			63.3	63.3
Half-gallon		0.5	19.1	19.6
Quart		0.2	2.8	3.0
Pint		0.1	2.4	2.4
Half-pint		8.3	1.6	9.9
6-Gallon				
5-Gallon			1.2	1.2
Other		0.5	0.1	0.6
Total of all sizes		9.6	90.4	100.0
	<u>Mideast</u>			
Gallon	<u>3</u> /		69.6	69.6
Half-gallon	<u>3</u> /	2.3	12.6	14.9
Quart	<u>3</u> /	1.6	1.3	2.8
Pint		0.2	1.8	2.0
Half-pint	<u>3</u> /	8.7	0.5	9.2
6-Gallon			<u>3</u> /	<u>3</u> /
5-Gallon			1.2	1.2
Other		0.3	0.1	0.4
Total of all sizes	<u>3</u> /	13.0	87.0	100.0
	<u>Northeast</u>			
Gallon			54.2	54.2
Half-gallon	0.2	11.3	13.8	25.2
Quart	<u>3</u> /	5.7	1.3	7.0
Pint		0.3	1.9	2.2
Half-pint		8.0	0.1	8.1
6-Gallon			0.5	0.5
5-Gallon			1.0	1.0
Other		0.8	0.9	1.7
Total of all sizes	0.2	26.0	73.8	100.0

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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 2001 1--continued

Size of container <u>2</u> /	Type of container			
	Glass	Paper	Plastic	Total of all types
	Percent			
	<u>Pacific Northwest</u>			
Gallon		<u>5</u> /	72.5	72.5
Half-gallon		12.4	2.5	14.8
Quart		3.5	0.2	3.7
Pint		1.4	0.4	1.8
Half-pint		4.8	<u>5</u> /	4.8
6-Gallon			<u>5</u> /	<u>5</u> /
5-Gallon			0.9	0.9
Other		0.6	0.9	1.5
Total of all sizes		22.7	77.3	100.0
	<u>Southeast</u>			
Gallon	<u>5</u> /	<u>5</u> /	64.6	64.6
Half-gallon		1.5	14.9	16.4
Quart		1.2	1.3	2.6
Pint		0.4	2.4	2.8
Half-pint		9.4	2.4	11.8
6-Gallon				
5-Gallon			0.8	0.8
Other	0.1	0.8	0.1	1.0
Total of all sizes	0.1	13.3	86.6	100.0
	<u>Southwest</u>			
Gallon			67.3	67.3
Half-gallon		2.5	12.8	15.4
Quart	0.3	1.5	0.7	2.5
Pint		<u>3</u> /	2.4	2.4
Half-pint		11.4	0.3	11.7
6-Gallon				
5-Gallon			0.8	0.8
Other			<u>3</u> /	<u>3</u> /
Total of all sizes	0.3	15.5	84.2	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 2001 1--continued

Size of container <u>2</u> /	Type of container			
	Glass	Paper	Plastic	Total of all types
Percent				
<u>Upper Midwest</u>				
Gallon			66.3	66.3
Half-gallon	1.1	6.9	9.5	17.5
Quart		1.6	0.7	2.4
Pint		0.3	1.1	1.4
Half-pint		9.4	0.3	9.6
6-Gallon				
5-Gallon			1.6	1.6
Other		0.5	0.7	1.2
Total of all sizes	1.1	18.6	80.3	100.0

* The data for Arizona-Las Vegas and Western have been combined in order to mask restricted data.

1/ The figures in the table are based on the total sales volume for the milk order group. 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. 3/ Less than 0.05 percent. 4/ Data are restricted; pertains to the operations of fewer than three handlers. Data are included in "Other." 5/ Data are restricted and are included in "Total of all sizes."

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 2001 1/

Federal milk Order	Size of single-serve round plastic container			
	Half-pint	Pint	Other	Total
	Percent			
Appalachian	0.9	1.4	0	2.3
Arizona-Las Vegas/Western*	0.1	1.4	<u>3/</u>	1.5
Central	<u>2/</u>	1.4	<u>3/</u>	1.4
Florida	0.3	0.1	0	0.4
Mideast	0.5	1.8	0	2.3
Northeast	0.1	1.4	0.5	2.0
Pacific Northwest	0	0.4	0.2	0.6
Southeast	<u>3/</u>	1.1	0	1.1
Southwest	<u>2/</u>	2.4	<u>2/</u>	2.4
Upper Midwest	0.2	0.9	0.6	1.6
All orders combined	0.3	1.2	0.2	1.7

* The data for Arizona-Las Vegas and Western have been combined to mask restricted data.

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. It should be pointed out that this is only the second collection of data for this type of container. As such, for some orders, the data in this survey may not be comparable to the data from the 1999 survey due to data collection issues.

2/ Less than 0.05 percent.

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

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 2001

Year	Method of distribution ^{2/}						
	Home-delivery	Total wholesale	Type of wholesale outlet ^{3/}				All other
			Food chain stores		Institutional		
			Supermarket	Dairy and convenience	Military	Schools	
Percent							
1963	29.7	70.3	---	---	---	---	---
1967	23.1	76.9	---	---	---	---	---
1971	14.8	85.2	---	---	---	---	---
1975	6.9	93.1	---	---	---	---	---
1979	3.8	96.2	46.2	10.7	1.5 ^{4/}	7.6 ^{4/}	30.2
1983	1.8	98.2	50.2	9.8	1.4	6.7	30.1
1987	1.2	98.8	51.2	10.6	1.4	7.1	28.5
1991	1.0	99.0	55.2	10.4	1.0	6.7	25.8
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
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

^{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 2001 ^{1/}

Federal milk order	Method of distribution ^{2/}								
	Home-delivery	Total wholesale	Type of wholesale outlet						All other
			Food chain stores			Institutional			
			Total	Supermarkets	Dairy and convenience	Total	Military	Schools	
Percent									
Appalachian	0	100.0	67.4	55.9	11.5	9.5	1.2	8.3	23.1
Arizona-Las Vegas/Western*	0.7	99.3	68.1	61.2	6.8	6.7	1.6	5.1	24.5
Central	^{3/}	100.0	56.4	51.8	4.6	7.8	0.8	7.1	35.7
Florida	0	100.0	71.7	61.2	10.5	3.6	^{4/}	3.6	24.7
Mideast	^{3/}	100.0	62.8	52.2	10.6	6.6	0.3	6.3	30.6
Northeast	0.4	99.6	67.7	50.3	17.4	8.0	1.1	6.9	23.9
Pacific Northwest	^{3/}	100.0	62.8	57.2	5.6	4.4	1.1	3.4	32.7
Southeast	^{3/}	100.0	54.3	48.1	6.2	10.2	1.5	8.8	35.4
Southwest	^{3/}	100.0	67.1	62.7	4.3	9.4	1.0	8.4	23.6
Upper Midwest	1.5	98.5	57.6	49.7	7.9	8.4	0.1	8.3	32.5
All orders combined	0.4	99.6	63.4	53.5	10.0	7.9	0.9	7.0	28.3

* The data for Arizona-Las Vegas and Western have been combined in order to mask restricted data.

^{1/} The figures in the table are based on the total sales volume for the milk order group. 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 various methods of distribution.

^{3/} Data are restricted; pertains to the operations of fewer than three handlers. Data are included in "All other wholesale."

^{4/} Data are restricted; pertains to the operations of fewer than three handlers. Data are included in "Schools."

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 2001 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	67.4	21.7	34.2	<u>3/</u>	11.5	21.7
Arizona-Las Vegas/Western*	68.1	39.0	22.3	<u>3/</u>	6.8	39.0
Central	56.4	11.1	40.7	<u>3/</u>	4.6	11.1
Florida	71.7	52.1	9.1	4.0	6.5	56.2
Mideast	62.8	8.0	44.2	1.1	9.5	9.1
Northeast	67.7	13.9	36.4	4.5	12.9	18.4
Pacific Northwest	62.8	33.3	24.0	0	5.6	33.3
Southeast	54.3	35.3	12.8	4.8	1.4	40.1
Southwest	67.1	30.4	32.3	0	4.3	30.4
Upper Midwest	57.6	0	49.7	<u>3/</u>	7.9	<u>3/</u>
All orders combined	63.4	20.0	33.5	2.3	7.7	22.3

* The data for Arizona-Las Vegas and Western have been combined in order to mask restricted data.

1/ The figures in the table are based on the total sales volume for the milk order group. 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.

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 2001 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	23.1	15.1	0	7.9
Arizona-Las Vegas/Western*	24.5	<u>4/</u>	<u>4/</u>	24.5
Central <u>3/</u>	35.7	6.0	3.0	26.7
Florida	24.7	7.5	<u>4/</u>	17.1
Mideast <u>3/</u>	30.6	7.5	1.7	21.3
Northeast	23.9	4.6	1.4	17.9
Pacific Northwest <u>3/</u>	32.7	<u>4/</u>	<u>4/</u>	32.7
Southeast <u>3/</u>	35.4	13.1	4.7	17.6
Southwest <u>3/</u>	23.6	3.8	7.1	12.6
Upper Midwest	32.5	<u>4/</u>	<u>4/</u>	32.5
All orders combined	28.3	6.5	2.6	19.3

* The data for Arizona-Las Vegas and Western have been combined in order to mask restricted data.

1/ The figures in the table are based on the total sales volume for the milk order group. 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.

5/ Data are restricted; pertains to the operations of fewer than three handlers. Data are included in “Warehouse stores/wholesale clubs.” “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, 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 1/2 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 2001 <u>1/</u>	Federal milk order	Sales in November 2001 <u>2/</u>	Year	Sales in November <u>3/</u>
	1,000 pounds		1,000 pounds		1,000 Pounds
Whole milk	1,247,089	Appalachian	373,205	1963	1,662,174
Flavored whole milk	73,192	Arizona-Las Vegas/Western*	168,457	1967	2,297,632
Eggnog	52,065	Central	411,156	1971	3,365,148
Reduced fat (2%) milk	1,238,673	Florida	212,453	1975	3,290,151
Low fat (1%) milk	438,250	Mideast	550,031	1979	3,512,377
Fat-free (skim) milk	579,761	Northeast	916,123	1983	3,485,998
Flavored fat-reduced milk	241,799	Pacific Northwest	177,681	1987	3,500,266
Buttermilk	46,624	Southeast	403,581	1991	3,839,200
Total fluid milk products	3,917,452	Southwest	347,405	1995	3,762,277
		Upper Midwest	357,361	1997	3,651,023
		All orders combined	3,917,452	1999	3,724,179
				2001	3,917,452

* The data for Arizona-Las Vegas and Western have been combined.

1/ Total sales for all orders combined.

2/ Sales of total fluid milk products for 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
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
Eggnog	9.00	4.500	2.2500	1.1250	.5625	54.00	45.00
Reduced fat (2%) milk	8.62	4.310	2.1550	1.0775	.5388	51.72	43.10
Low fat (1%) milk	8.62	4.310	2.1550	1.0775	.5388	51.72	43.10
Fat-free (skim) milk	8.63	4.315	2.1575	1.0788	.5394	51.78	43.15
Flavored fat-reduced milk	8.00	4.000	2.0000	1.0000	.5000	48.00	40.00
Buttermilk	8.62	4.310	2.1550	1.0775	.5388	51.72	43.10

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.