

Producer Structure in Federal Milk Orders in May 2005 *

During 2005, handlers regulated under Federal milk orders (FMO) received milk from 53,036 producers (dairy farmers). The volume of these milk receipts, 114.7 billion pounds, accounted for about 66 percent of total fluid grade milk marketed in the United States. Data on the volume of FMO milk marketed per producer, along with comparisons to similar data in earlier years, provides information on the current structure of U. S. dairy farmers and illustrates trends taking place in this sector of the dairy industry.

Information on individual producer milk marketings in May 2005 was obtained from the market administrators of the ten FMOs. These data were sorted according to the State location of the producer and were arrayed into 10 size groups based on the volume of milk received from the producer. Beginning with this survey, the information also was collected for producers according to cooperative membership. For most States, the information in this report should be representative of the structure of all dairy farmers marketing fluid grade milk. However, for some States, where the proportion of milk marketings marketed under Federal milk orders were relatively small, California, Idaho, Montana, Nevada, and Wyoming, the information likely is not representative.

This report summarizes the major findings of the current survey, and presents comparisons to similar data for previous years. These findings are:

- (1) For all producers, the average volume of milk marketed in May 2005 was 199,111 pounds, roughly equivalent to the production of 114 cows. Producers who are members of cooperatives accounted for nearly 88 percent of all producers and marketed an average of 207,194 pounds of milk, about four percent more than the average for all producers. Independent producers marketed significantly less milk – 141,602 pounds, about 29 percent lower than average. Cooperative members marketed about 91 percent of all the milk marketed under FMO. (See tables 1.)
- (2) For all Federal milk orders, the milk marketings size group with the largest number of producers was the 50,000 – 99,999 pound size group with 33 percent of total producers. The milk marketings size group with the largest volume of milk was the 100,000 – 249,999 pound size; 23 percent of total receipts were in this group. Smaller producers, those marketing less than 100,000 pounds of milk, account for 56 percent of all producers, and only 16 percent of all receipts. There were 1,634 producers who marketed more than 1,000,000 pounds of milk. While these producers accounted for only 3 percent of producers, they marketed 37 percent of total milk receipts. There were 147 producers who marketed more than 5,000,000 pounds of milk.

The frequency distribution of the milk marketings size groups for cooperative members was not that different than for all producers. Independent producers had significantly more milk marketed in the smaller size groups. (See table 1.)

- (3) Producers marketing milk under FMOs show significant variations in size by region. For example, producers in the West marketed 1,292,094 pounds of milk, nearly 6.5 times as much as the average for all producers. In this region, producers marketing more than 1,000,000 pounds of milk accounted for 35 percent of producers and 83 percent of milk marketed. More than half of all producers marketing 5,000,000 or more pounds of milk are located in the West. In contrast, producers in the North Atlantic marketed 143,489

pounds of milk, 28 percent less than the average for all producers. In this region, producers marketing less than 100,000 pounds of milk accounted for 61 percent of producers and 24 percent of milk marketed.

While producers in the North Atlantic, East North Central, and West North Central regions on the average marketed less milk per producer, each of these regions had producers in the larger milk marketings size groups. In fact, all regions had producers marketing 5,000,000 or more pounds of milk. (See table 2.)

- (4) On a State basis, the average volume of milk marketings per producer ranged from 80,760 pounds in Rhode Island, to 3,319,624 pounds in New Mexico. Other States with notably large average milk marketings per producer were Arizona, Colorado, and Florida. States with notably small averages were Kentucky, Missouri, Pennsylvania, and West Virginia.

The State with the largest average estimated number of milk cows per farm was New Mexico, which had 1,766 cows per farm; the State with the lowest average was Rhode Island, 49 cows. Of the 42 States listed, there were 21 for which the average estimated number of milk cows per farm was larger than the all producers combined average of 114 cows. There were 20 States where the average was smaller. There was one State where the averages were the same. (See table 3.)

- (5) The average volume of milk marketed per producer has increased significantly over time. For May 2005, the average was 23 percent larger than 2001 and 73 percent larger than in 1995. Compared to 20 years ago, the current average is more than 2.5 times as large.

The change in the relative importance of the milk marketings size groups over time further illustrates the significant growth in the volume of milk marketed per producer. In May 1985, producers marketing less than 100,000 pounds of milk accounted for 55 percent of total milk marketed; by 1995 this share was 32 percent. By May 2005, this group accounted for only 19 percent. Producers marketing more than 600,000 pounds of milk accounted for six percent of milk marketings in May 1985, less than 19 percent in May 1995, but 45 percent of receipts in May 2005. (See tables 1 and 4.)

* Prepared by Market Information Branch, Dairy Programs, Agricultural Marketing Service, USDA, July 2007.

Table 1 -- Number of Producers, Producer Milk Marketings, and Average Milk Marketings Per Producer for All Federal Milk Orders Combined, by Type of Cooperative Membership, by Milk Marketings Size Group, May 2005

Milk marketings size groups (Pounds) 1/	All Producers Combined						
	Producers			Producer Marketings			
	Number	Percent	Cumulative Percent	Thousand Pounds	Percent	Cumulative Percent	Average marketings in pounds
Up to 49,999	12,506	22.9	22.9	383,343	3.5	3.5	30,653
50,000-99,999	18,016	33.0	55.8	1,324,072	12.2	15.7	73,494
100,000-249,999	16,549	30.3	86.1	2,504,682	23.0	38.7	151,349
250,000-399,999	3,240	5.9	92.1	1,006,849	9.3	48.0	310,756
400,000-599,999	1,493	2.7	94.8	725,043	6.7	54.6	485,628
600,000-999,999	1,214	2.2	97.0	934,318	8.6	63.2	769,619
1,000,000-1,499,999	616	1.1	98.1	746,705	6.9	70.1	1,212,183
1,500,000-2,499,999	506	0.9	99.1	955,184	8.8	78.8	1,887,716
2,500,000-4,999,999	365	0.7	99.7	1,263,456	11.6	90.5	3,461,524
5,000,000 or more	147	0.3	100.0	1,038,165	9.5	100.0	7,062,348
Total 2/	54,652	100	---	10,881,818	100	---	199,111

Milk marketings size groups (Pounds) 1/	Cooperative Members						
	Producers			Producer Marketings			
	Number	Percent	Cumulative Percent	Thousand Pounds	Percent	Cumulative Percent	Average marketings in pounds
Up to 49,999	11,040	23.0	23.0	336,548	3.4	3.4	30,484
50,000-99,999	15,539	32.4	55.5	1,141,862	11.5	14.9	73,484
100,000-249,999	14,419	30.1	85.6	2,185,326	22.0	36.9	151,559
250,000-399,999	2,897	6.0	91.6	902,213	9.1	46.0	311,430
400,000-599,999	1,347	2.8	94.4	653,873	6.6	52.6	485,429
600,000-999,999	1,111	2.3	96.8	856,890	8.6	61.2	771,278
1,000,000-1,499,999	571	1.2	97.9	692,519	7.0	68.2	1,212,818
1,500,000-2,499,999	486	1.0	99.0	916,864	9.2	77.4	1,886,551
2,500,000-4,999,999	355	0.7	99.7	1,229,657	12.4	89.8	3,463,822
5,000,000 or more	143	0.3	100.0	1,010,497	10.2	100.0	7,066,413
Total 2/	47,908	100	---	9,926,249	100	---	207,194

Milk marketings size groups (Pounds) 1/	Independents (Non-members)						
	Producers			Producer Marketings			
	Number	Percent	Cumulative Percent	Thousand Pounds	Percent	Cumulative Percent	Average marketings in pounds
Up to 49,999	1,466	21.7	21.7	46,795	4.9	4.9	31,920
50,000-99,999	2,477	36.7	58.5	182,210	19.1	24.0	73,561
100,000-249,999	2,130	31.6	90.1	319,357	33.4	57.4	149,933
250,000-399,999	343	5.1	95.1	104,636	11.0	68.3	305,061
400,000-599,999	146	2.2	97.3	71,170	7.4	75.8	487,466
600,000-999,999	103	1.5	98.8	77,428	8.1	83.9	751,724
1,000,000-1,499,999	45	0.7	99.5	54,185	5.7	89.6	1,204,119
1,500,000-2,499,999	19	0.3	99.8	35,382	3.7	93.3	1,862,210
2,500,000-4,999,999	11	0.2	99.9	36,738	3.8	97.1	3,339,802
5,000,000 or more	4	0.1	100	27,668	2.9	100	6,916,993
Total 2/	6,744	100	---	955,569	100	---	141,692

1/ These milk marketings size groups can be converted to approximate herd-size groups by assuming that the U.S. average milk production per cow of 1,754 in May 2005 is representative for these producers. For example, the "up to 49,999" milk marketings size group would convert to a "1-28" herd size group (1-28 cows). 2/ Totals and Cumulative Percents may not add due to rounding.

Table 2 -- Number of Producers, Volume of Producer Milk Marketings, and Average Milk Marketings Per Producer, Based on Milk Marketed Under Federal Orders, by Milk Marketings Size Group, by Region, May 2005 1/

Milk marketings size groups (pounds)	Producers		Producer Marketings			Milk marketings size groups (pounds)	Producers		Producer Marketings		
	Number	Percent	1,000 pounds	Percent	Average 2/ (pounds)		Number	Percent	1,000 pounds	Percent	Average 2/ (pounds)
<u>NORTH ATLANTIC 3/</u>						<u>EAST NORTH CENTRAL 7/</u>					
Up to 49,999	3,808	23.5	114,625	4.9	30,101	Up to 49,999	5,073	24.9	155,813	4.7	30,714
50,000-99,999	6,021	37.2	445,370	19.2	73,969	50,000-99,999	6,800	33.3	497,774	14.9	73,202
100,000-249,999	4,720	29.1	701,139	30.2	148,546	100,000-249,999	6,012	29.5	905,777	27.1	150,661
250,000-399,999	772	4.8	237,905	10.2	308,166	250,000-399,999	1,182	5.8	369,035	11.0	312,212
400,000-599,999	345	2.1	169,182	7.3	490,383	400,000-599,999	511	2.5	248,005	7.4	485,332
600,000-999,999	264	1.6	202,624	8.7	767,515	600,000-999,999	403	2.0	310,660	9.3	770,869
1,000,000-1,499,999	146	0.9	178,753	7.7	1,224,337	1,000,000-1,499,999	187	0.9	226,204	6.8	1,209,646
1,500,000-2,499,999	83	0.5	157,545	6.8	1,898,135	1,500,000-2,499,999	129	0.6	235,032	7.0	1,821,951
2,500,000-4,999,999	32	0.2	97,858	4.2	3,058,065	2,500,000-4,999,999	69	0.3	229,218	6.9	3,321,993
5,000,000 or more	3	4/	18,657	0.8	6,218,990	5,000,000 or more	24	0.1	167,246	5.0	6,968,584
Total	16,194	100	2,323,658	100	143,489	Total	20,390	100	3,344,763	100	164,039
<u>SOUTH ATLANTIC 5/</u>						<u>WEST NORTH CENTRAL 8/</u>					
Up to 49,999	513	19.1	14,460	2.0	28,187	Up to 49,999	2,052	21.1	66,010	4.0	32,169
50,000-99,999	522	19.4	38,245	5.3	73,267	50,000-99,999	3,366	34.6	246,478	15.0	73,226
100,000-249,999	1,006	37.4	162,969	22.6	161,997	100,000-249,999	3,248	33.4	486,450	29.6	149,769
250,000-399,999	293	10.9	90,136	12.5	307,632	250,000-399,999	511	5.3	158,266	9.6	309,719
400,000-599,999	144	5.4	69,882	9.7	485,290	400,000-599,999	204	2.1	97,627	5.9	478,563
600,000-999,999	88	3.3	67,977	9.4	772,467	600,000-999,999	165	1.7	123,064	7.5	745,842
1,000,000-1,499,999	43	1.6	52,430	7.3	1,219,310	1,000,000-1,499,999	70	0.7	84,811	5.2	1,211,579
1,500,000-2,499,999	50	1.9	97,307	13.5	1,946,133	1,500,000-2,499,999	52	0.5	96,708	5.9	1,859,761
2,500,000-4,999,999	25	0.9	87,744	12.2	3,509,766	2,500,000-4,999,999	38	0.4	133,263	8.1	3,506,934
5,000,000 or more	6	0.2	38,984	5.4	6,497,393	5,000,000 or more	19	0.2	150,537	9.2	7,923,017
Total	2,690	100	720,135	100	267,708	Total	9,725	100	1,643,214	100	168,968
<u>SOUTH CENTRAL 6/</u>						<u>WEST 9/</u>					
Up to 49,999	971	23.0	29,787	3.0	30,677	Up to 49,999	89	6.2	2,647	0.1	29,744
50,000-99,999	1,208	28.6	88,537	8.8	73,292	50,000-99,999	99	6.9	7,669	0.4	77,460
100,000-249,999	1,292	30.6	202,100	20.2	156,424	100,000-249,999	271	18.9	46,248	2.5	170,656
250,000-399,999	330	7.8	103,762	10.4	314,431	250,000-399,999	152	10.6	47,745	2.6	314,114
400,000-599,999	160	3.8	77,694	7.8	485,586	400,000-599,999	129	9.0	62,654	3.4	485,688
600,000-999,999	104	2.5	81,216	8.1	780,925	600,000-999,999	190	13.3	148,776	8.0	783,032
1,000,000-1,499,999	47	1.1	56,099	5.6	1,193,605	1,000,000-1,499,999	123	8.6	148,407	8.0	1,206,562
1,500,000-2,499,999	49	1.2	93,812	9.4	1,914,536	1,500,000-2,499,999	143	10.0	274,781	14.9	1,921,544
2,500,000-4,999,999	45	1.1	162,223	16.2	3,604,961	2,500,000-4,999,999	156	10.9	553,150	29.9	3,545,832
5,000,000 or more	16	0.4	105,830	10.6	6,614,394	5,000,000 or more	79	5.5	556,910	30.1	7,049,496
Total	4,222	100	1,001,061	100	237,106	Total	1,431	100	1,848,987	100	1,292,094

1/ Total marketings of milk by producers located in each State to handlers regulated under Federal milk marketing orders. The plants to which milk from a particular State is delivered are not located necessarily in that State. Data for Alaska and Hawaii are not shown as none of the producers in these States marketed milk under Federal orders. 2/ Average milk marketings per producer. Figures are computed using unrounded numbers. Totals may not add due to rounding. 3/ North Atlantic Region includes CT, MA, ME, NH, NJ, NY, PA, RI, and VT. 4/ Less than 0.05 percent. 5/ South Atlantic Region includes DE, FL, GA, MD, NC, SC, VA, and WV. 6/ South Central Region includes AL, AR, KY, LA, MS, OK, TN, and TX. 7/ East North Central Region includes IL, IN, MI, OH, and WI. 8/ West North Central Region includes IA, KS, MN, MO, ND, NE, and SD. 9/ West Region includes AZ, CA, CO, ID, MT, NM, NV, OR, UT, WA, and WY.

Table 3 -- For Dairy Farmers Marketing Milk Under Federal Orders: Average Milk Marketings Per Producer, Average Number of Milk Cows Per Farm, and Milk Marketings under Federal Orders as a Proportion of State Milk Marketings, By State, May 2005

State	Average milk marketings per producer	Average number of milk cows per farm 1/	Federal order milk marketings as a percent of State fluid grade milk marketings 2/	State	Average milk marketings per producer	Average number of milk cows per farm 1/	Federal order milk marketings as a percent of State fluid grade milk marketings 2/
Alabama	238,288	182	100	New Hampshire	185,139	111	97
Arizona	2,911,433	1,392	84	New Jersey	148,702	105	94
Arkansas	129,372	109	95	New Mexico	3,319,624	1,766	94
Colorado	1,236,277	633	93	New York	166,825	100	95
Connecticut	207,081	123	97	North Carolina	243,023	157	98
Delaware	187,787	121	92	North Dakota	143,817	105	51
Florida	1,219,600	772	100	Ohio	148,202	94	97
Georgia	301,914	194	97	Oklahoma	205,400	144	66
Illinois	153,178	92	95	Oregon	487,985	291	61
Indiana	185,667	103	99	Pennsylvania	115,667	69	95
Iowa	175,530	96	92	Rhode Island	80,760	49	79
Kansas	417,634	230	97	South Carolina	311,121	210	99
Kentucky	93,528	78	99	South Dakota	234,522	154	73
Louisiana	137,120	119	100	Tennessee	138,932	102	98
Maine	142,451	91	99	Texas	599,164	327	98
Maryland	161,310	116	99	Vermont	195,183	118	100
Massachusetts	129,516	86	94	Virginia	158,657	102	77
Michigan	253,054	133	99	Washington	884,650	430	92
Minnesota	144,772	90	84	West Virginia	115,717	94	78
Mississippi	159,451	114	100	Wisconsin	149,669	93	86
Missouri	117,933	85	96	All States			
Nebraska	244,934	158	92	Combined	199,111	114	66

1/ Average milk marketings per producer divided by average milk production per cow as reported by the National Agriculture Statistics Service (NASS). For some States, the monthly milk production per cow was estimated from quarterly data. 2/ Figures were computed using annual Federal milk order marketings and annual fluid grade milk marketings reported by NASS. **Note:** NASS statistics include milk sold directly to consumers and milk produced by institutional herds. Data for the following States are not shown either because there was a small number of producers marketing milk under Federal orders or the data is administratively confidential; California, Idaho, Montana, Nevada, Utah, and Wyoming. Data for Alaska and Hawaii are not shown as none of the producers in these States marketed milk under Federal orders.

Table 4 -- Number of Producers, Producer Milk Marketings, and Average Milk Marketings per Producer for all Federal Milk Orders Combined, by Milk Marketings Size Group, May, 1985, 1990, 1995, and 2001

Milk marketings size Groups (pounds)	1985		1990		1995		2001	
	Number of Producers	Producer Marketings	Number of Producers	Producer Marketings	Number of Producers	Producer Marketings	Number of Producers	Producer Marketings
	<u>Percent of Total</u>							
Up to 49,999	40.1	17.0	32.0	10.9	27.8	7.6	27.2	4.8
50,000-99,999	40.8	37.6	41.3	31.3	39.0	24.6	34.0	15.4
100,000-249,999	16.7	30.7	22.5	34.3	26.6	33.9	27.7	25.7
250,000-399,999	1.5	5.9	2.4	7.9	3.6	9.6	4.9	9.5
400,000-599,999	0.4	2.8	0.9	4.6	1.3	5.5	2.2	6.7
600,000-999,999	0.4	6.0	0.9	11.0	1.6	18.7	1.8	8.6
1,000,000-1,499,999	--- 1/	---	---	---	---	---	0.9	6.6
1,500,000-2,499,999	---	---	---	---	---	---	0.7	8.6
2,500,000-4,999,999	---	---	---	---	---	---	0.5	9.5
5,000,000 or more	---	---	---	---	---	---	0.1	4.6
Total	100	100	100	100	100	100	100	100
Number of Producers	115,998		96,298		89,675		66,021	
Producer Marketings	8,858,209		9,090,974		10,306,414		10,650,255	
Average milk marketings Per Producer (Pounds)	76,365		94,405		114,931		161,316	

1/ Prior to 2001, the maximum milk marketings size group was 600,000 pounds or more.