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CHANGES IN THE ARIZONA ORDER'S CLASS I MARKET: 2000 - 2015

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Change is perhaps the only constant. Significant changes in the character of the Class I market in the Arizona Order over the last 15 years illustrate this point. [2] The Class I market is essentially milk sold as a beverage. Using a variety of perspectives, this article attempts to illustrate the changes from 2000 through 2015. Data used in this analysis include Class I producer milk utilization and route sales in the Arizona marketing area of fully regulated handlers, and route sales in the marketing area by producer-handlers and other handlers. Different groups of data are used to highlight different aspects of the changes.

General Changes

Between 2000 and 2005, Class I producer milk held steady at just under 1.0 billion pounds. In April and May 2006, regulatory changes occurred. In April 2006, the Arizona Order was changed after a hearing and a vote of producers to fully regulate those handlers whose routes exceed 3.0 million pounds monthly and who meet the criteria of a pool distributing plant. In addition, in May 2006, the US Congress passed the Milk Regulatory Equity Act (MREA) of 2005 to "ensure regulatory equity between and among all dairy farmers and handlers for sales of packaged fluid milk in federally regulated milk marketing areas and into certain non-federally regulated milk marketing areas from federally regulated areas." [3] These regulatory changes resulted in about 400 million pounds being added annually to Class I producer milk, increasing the totals from about 1.0 billion pounds to a peak of about 1.4 billion pounds in 2009. Since 2009, Class I producer milk has decreased to about 1.3 billion pounds, or about 8 percent. Since 2000, the average number of plants associated with Class I producer milk increased by two while the average Class I producer milk per plant, decreased from about 27 million pounds per month to just over 21 million pounds.

Table 1: Basic Character of the Class I Market: 2000-2015

Year	Average No. of Plants *	Class I Producer Milk	Average Per Plant Per Month †	Butterfat Test
		- Million Pounds -		- % -
2000	3	973.3	27.0	1.97
2001	3	953.0	26.5	1.99
2002	3	963.9	26.8	2.00
2003	3	976.0	27.1	2.03
2004	3	967.2	26.9	1.98
2005	3	986.2	27.4	1.93
2006	4	1,268.9	23.9	2.01
2007	5	1,392.5	23.2	2.02
2008	5	1,399.2	23.3	1.94
2009	5	1,427.3	23.8	1.92
2010	5	1,400.0	23.3	1.87
2011	5	1,410.5	23.5	1.89
2012	5	1,399.8	23.3	1.90
2013	5	1,357.1	22.6	1.93
2014	5	1,287.1	21.5	1.95
2015	5	1,310.3	21.5	1.99
Change ‡	69%	35%	-21%	0.02

* Plants include pool distributing plants only.
† Average plant size equals Class I producer milk divided by the average number of plants.
‡ Percent change from 2000 to 2015. Columns reflecting percentages are percentage point changes.

[1] John Mykrantz is an Agricultural Economist with the Market Administrator's Office, Bothell, Washington.
[2] The marketing area of the Arizona Order consists of the State of Arizona. Population estimates are drawn from US Census Bureau State data. Estimates of population data for 2001-2009 and 2011-2014 are based on interpolation.
[3] MREA of 2005: https://www.congress.gov/109/plaws/publ215/PLAW-109publ215.pdf. In addition to changing the criteria of which plants are regulated, the MREA also removed Clark County, Nevada, from the marketing area, changing the former Arizona-Las Vegas Order to the Arizona Order. The change in the marketing area did not cause a reduction in the number of fully regulated plants. Two plants in Clark County had been exempt from regulation by virtue of the Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2000 (Public Law 106-78, effective October 1, 1999), and became partially regulated on sales into Arizona effective May 2006.

The component character of Class I milk has also changed. The weighted average butterfat test of milk used in Class I products has varied over the past 15 years, increasing and decreasing in a sawtooth pattern between a little over 2 percent and a little under 1.9 percent (See Table 1). Since 2010, the butterfat test of Class I milk has increased steadily from a low of about 1.9 percent to about 2 percent in 2015. The increase in the butterfat test of Class I milk between 2010 and 2015 is the net result of increases in Whole milk, Lowfat and Flavored & Buttermilk sales relative to declines in Reduced Fat and Fat Free milk sales (See Table 2).

Changes in In-Area Sales: Sources, Per Capita, and Product Mix

In-Area sales have changed with respect to sources, and in terms of per capita and product mix. The sources of Class I in-area sales have fluctuated between fully regulated pool distributing plants, and producer-handler and other plants. Other plants include: plants that are partially regulated; plants that are fully regulated under another order; and exempt plants. In 2000, in-area sales of fully regulated plants represented 76 percent of sales while plants not fully regulated under the order represented 24 percent (See Table 2). The vast majority of non-fully regulated plant sales prior to 2006 were from producer-handlers. In April and May 2006, several criteria of the Arizona Order were changed. These regulatory changes resulted in a noticeable shift in the source of in-area sales of about 20 percentage points between fully regulated pool distributing plants, and producer-handler and other plants. After reaching a peak of 95 percent in 2007, in-area sales by fully regulated handlers have slowly dropped to about 92 percent. The vast majority of the 3 to 4 percentage point increase of in-area sales by other plants since 2007 is primarily associated with changes in sales by partially regulated plants and plants fully regulated on other orders. A list of plants associated with the Arizona Order can be found at: http://fmmaseattle.com/plantshandlerslist.html.

Table 2: Class I In-Area Sales: 2000-2015

								Percent Share by Product Type				
Year	Pool Plants		Producer-Handler & Other Plants		Total In-Area	Population *	Average Per Capita †	Whole	Reduced Fat	Lowfat	Fat Free	Flavored & Buttermilk
	- Million -	- % -	- Million -	- % -	- Million -	- Million -	- Gallons -					
2000	921	76%	291	24%	1,211	5.161	27.2	30.8%	38.4%	11.0%	13.8%	6.0%
2001	892	72%	351	28%	1,243	5.273	27.3	32.3%	37.4%	10.9%	13.0%	6.3%
2002	906	71%	369	29%	1,275	5.396	27.4	33.7%	36.1%	10.9%	12.5%	6.8%
2003	922	71%	381	29%	1,303	5.510	27.4	33.7%	36.2%	10.5%	12.3%	7.3%
2004	917	71%	374	29%	1,291	5.652	26.5	31.3%	37.4%	11.1%	12.9%	7.4%
2005	931	73%	336	27%	1,268	5.839	25.2	29.1%	38.4%	11.9%	13.0%	7.6%
2006	1,132	89%	134	11%	1,266	6.029	24.4	29.6%	36.3%	12.8%	13.9%	7.5%
2007	1,150	95%	60	5%	1,210	6.168	22.8	28.4%	37.1%	13.9%	13.4%	7.2%
2008	1,131	95%	60	5%	1,191	6.280	22.0	26.1%	38.7%	14.4%	13.8%	7.0%
2009	1,151	95%	59	5%	1,210	6.343	22.1	25.5%	38.4%	15.2%	13.7%	7.1%
2010	1,122	94%	70	6%	1,193	6.414	21.6	25.2%	36.5%	17.0%	13.8%	7.5%
2011	1,109	94%	71	6%	1,179	6.473	21.1	25.3%	36.2%	17.5%	13.7%	7.2%
2012	1,087	94%	70	6%	1,157	6.556	20.5	25.8%	36.3%	17.7%	13.0%	7.2%
2013	1,049	93%	84	7%	1,133	6.635	19.8	26.8%	36.2%	17.3%	12.0%	7.7%
2014	1,009	91%	94	9%	1,103	6.731	19.0	27.9%	35.8%	17.3%	10.7%	8.3%
2015	994	92%	90	8%	1,084	6.828	18.4	29.4%	35.7%	16.7%	9.6%	8.6%
Change ‡	8%	15.7	-69%	-15.7	-11%	32%	-32%	-1.3	-2.8	5.7	-4.2	2.6

* Population estimates are drawn from US Census Bureau State data.
† Average per capita is total in-area sales, divided by 8.62 pounds per gallon, divided by population.
‡ Percent change from 2000 to 2015. Columns reflecting percentages are percentage point changes.

On a per capita basis, in-area sales were a little over 27 gallons in the early 2000's. Since 2003, per capita in-area sales have declined by about 0.7 gallons per year to a little over 18 gallons in 2015. For comparison purposes, US per capita fluid milk consumption was about 18 gallons in 2014. [4]

[4] Dairy product data can be found at: http://www.ers.usda.gov/data-products/dairy-data.aspx.

The product mix of in-area sales has changed as well. The period can roughly be divided into three sub-periods: 2000-2003, 2003-2010 and 2010-2015. Between 2000 and 2003, the share of sales of Whole and Reduced Fat suggest a switching from Reduced Fat to Whole products with other products' shares holding roughly steady. Between 2003 and 2010, a similar switching in sales patterns appears to have occurred from Whole milk products to Lowfat products. Beginning in 2010, yet another shift appears to occur from Fat Free to Whole. In 2010, the share of Whole milk sales represented about 25 percent of the total. By 2015, the share of sales represented by Whole milk increased to almost 30 percent. During the 2010 to 2015 period, the decreases in the share of in-area sales represented by Fat Free milk appears to mirror the increases in Whole milk, dropping from about 14 percent to about 10 percent by 2015.

Summary

Over the past 15 years, the character of the Class I market of the Arizona Order has changed substantively. And while total sales in 2015 are less than in 2000 and per capita consumption is down, consumers are choosing milk products with higher butterfat content. It will be interesting to see what changes the next five years will bring.