MARKETING SERVICE
BULLETIN

Component Levels in Producer Milk

U.S. Butterfat Tests: Butterfat levels in producer milk have received increased industry attention in recent months, and national data* indicates a declining trend in the butterfat content of raw milk dating back to late 2008. This data indicates that average producer milk butterfat tests have been lower than the corresponding month of the previous year in 19 of the last 21 months. The average test decrease during these 19 months was 0.02 percentage points compared with the previous year. Butterfat tests for all U.S. producer milk from January 2007 through July of this year are detailed in the graph on this page.

National butterfat tests have averaged 3.63% during the first seven months of this year. This compares to 3.65% for the same time period of 2009, and 3.67% for 2008 and 2007. Applying the January through July '07-'08 butterfat test average (3.67%) to estimated 2010 year-to-date milk production estimates results in a total of over 45 million pounds of butterfat. The elevated prices of wholesale butter this year reflect the influence of this "shortfall" in butterfat production. Recent Chicago Mercantile Exchange (CME) butter prices have reached levels not seen since May 2004, climbing above $2.10 per pound.

Since numerous factors contribute to the butterfat content in raw milk, determining the reasons for declining butterfat tests recorded over the past few months requires as examination of all possible contributors. While that task is beyond the scope of this publication, some of the factors influencing butterfat tests are included in the following list:

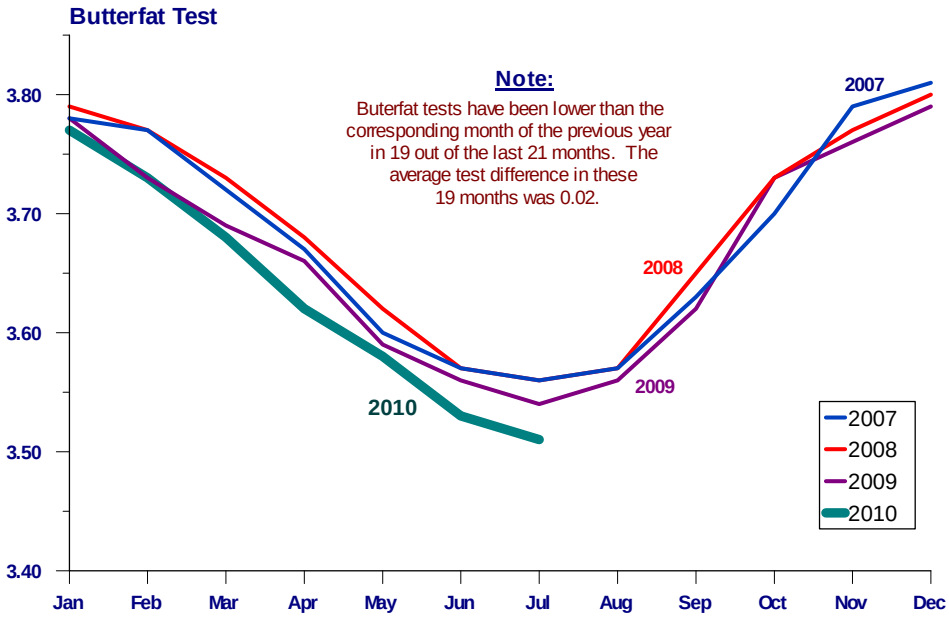
> *Weather conditions*, particularly temperature and humidity extremes.

> *Feed rations*, i.e., the amount, quality, and combinations of fiber, protein, fat, nutrients, etc.

> *Economic Conditions*, relative to milk prices, feed and other input costs, cash flow, etc.

> *Cow health/conditioning*, i.e., rumen "balance" as well as overall health.

> *Herd Management*, such as dry lot conditions, sire selection, access to water, shelter from weather, etc.



Central Order Data: The remainder of this bulletin will examine component levels in producer milk marketed under the Central Milk Order since its implementation in

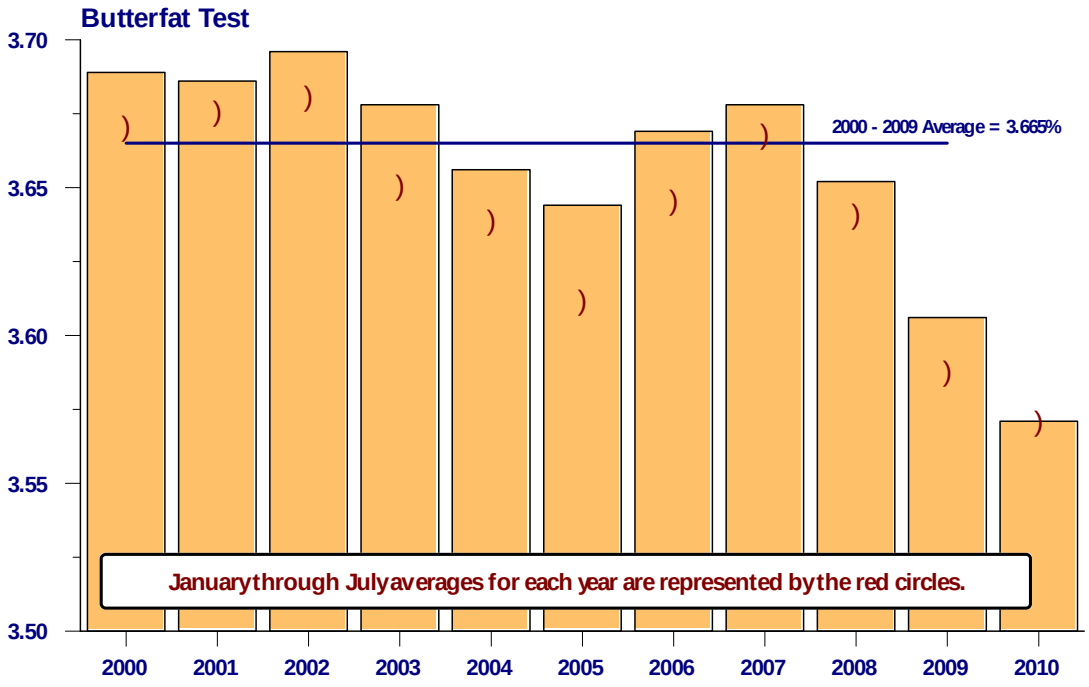
AUGUST 2010

* All U.S. butterfat tests used in this analysis are All Milk, Fat Tests as reported in ***Agricultural Prices***, Agricultural Statistics Board, National Agricultural Statistics Service, United States Department of Agriculture.

January 2000. Butterfat, protein, and other solids tests in producer milk will be examined, along with Central Order somatic cell count levels. Special emphasis will be placed on trends since the beginning of 2007.

Butterfat Test Data:

The Central Order producer butterfat test data detailed in the graph on this page depicts January through July averages for each year, along with annual test averages. *(This format is used in all yearly component test graphs in the remainder of this bulletin.)* Butterfat tests averaged 3.665% over the first 10 years of regulation under the Central Order (2000 through 2009).



Butterfat tests have declined during each of the past two calendar years, and 2010 year-to-date data indicates the current year will continue this declining trend. As indicated by this graph, annual butterfat tests were substantially higher than the 10-year average during the first four years of the Central Order's existence (2000 through 2003). The annual average has fallen below the 10-year average in all but two years since 2003. Explanations for the decline in Central Order butterfat tests may include some or all the factors noted on the first page of this bulletin, but this decrease may have also been influenced by changes in the geographic "footprint" of the Central Order milkshed.

A federal order milkshed is defined as the geographic region that supplies milk marketed, or pooled on the order. The number of states included in the Central Order milkshed has ranged from a low of 18 during 2000 and 2001, to a high of 23 in 2006 and 2008. More importantly, the "geographic center" of this milkshed has shifted significantly further south in recent years. Specifically, milk supplied from "Northern Tier"[1] states during the first four years of the Central Order's existence (2000 through 2004) accounted for over 63% of the order total during that time frame. Conversely, milk from "Southern Tier"[2] states supplied less than 5% of the order total during those years. Since the beginning of 2007, however, the proportion of the order total supplied from "Northern Tier" states has decreased to approximately 43%, while the "Southern Tier" states' proportion has increased to over 13%. (The proportion of milk from "Central Tier"[3] states increased from less than 33% to over 43%, comparing these two time periods.) The geographic shift in the Central Order milkshed is significant since butterfat tests tend to be higher in cooler climates and lower in warmer climates, other factors being equal. Thus, the increasing proportion of milk supplied from

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[1] For this analysis, "Northern Tier" states are defined as those states supplying milk to the Central Order that are located north of the northern boundaries of Illinois, Missouri, Kansas, and Colorado. States included in the "Northern Tier" category include: Idaho, Iowa, Michigan, Minnesota, Montana, North Dakota, South Dakota, Wisconsin, and Wyoming.

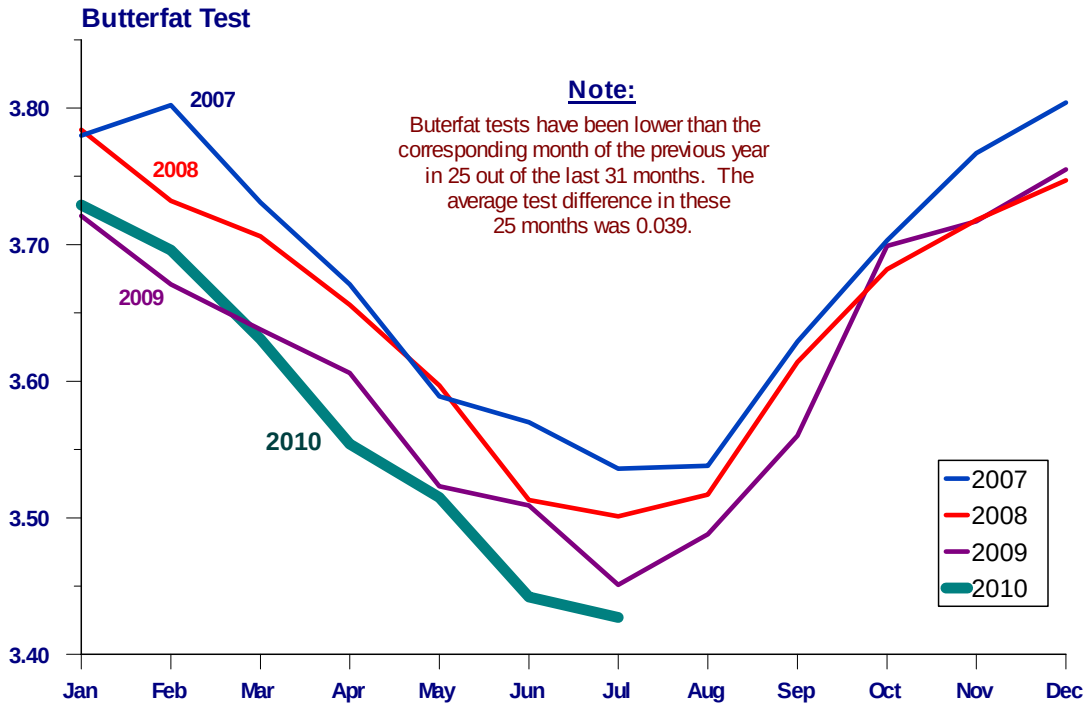
[2] For this analysis, "Southern Tier" states are defined as those states supplying milk to the Central Order that are located south of the southern boundaries of Illinois, Missouri, Kansas, and Colorado. States included in the "Southern Tier" category include: Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.

[3] For this analysis, "Central Tier" states are defined as those states supplying milk to the Central Order that are located south of the "Northern Tier" states southern boundaries and north of the "Southern Tier" states northern boundaries. States included in the "Central Tier" category include: California, Colorado, Illinois. Indiana, Kansas, Kentucky, Missouri, Nevada, Ohio, Tennessee, and Utah.

states located in warmer climates may be responsible for a portion of the decline in Central Order producer butterfat content.

Producer Milk Butterfat Tests

Central Federal Milk Order

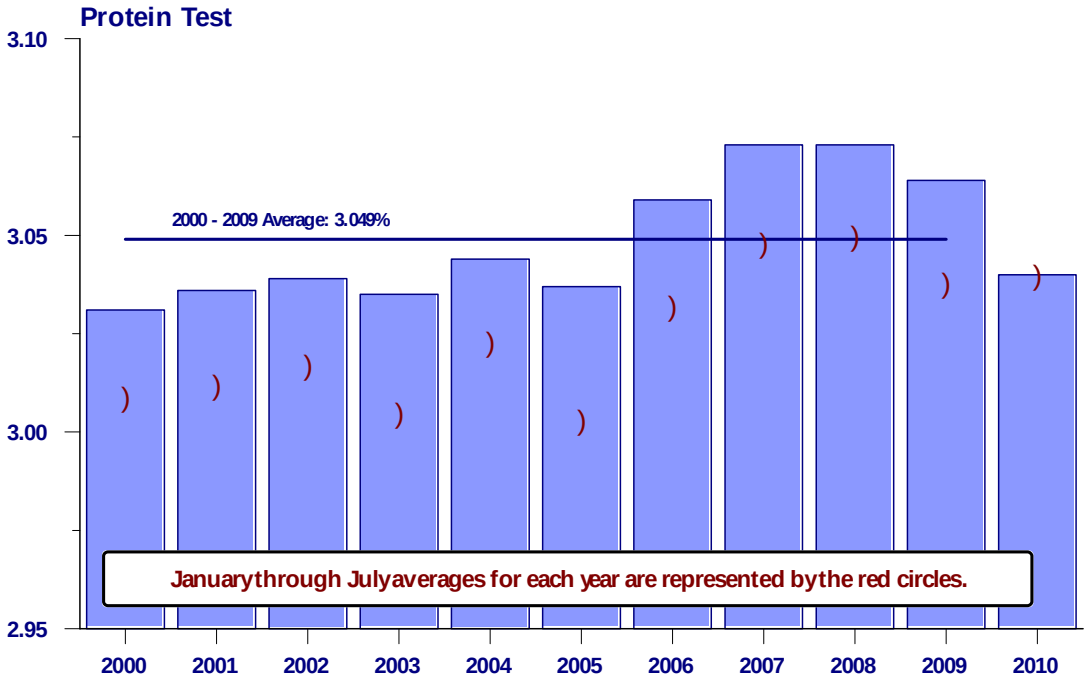


The top graph on this page depicts monthly butterfat tests for the Central Order from January 2007 through July 2010. Year-to-year comparisons of this monthly data demonstrates the extent to which butterfat tests have decreased during this time frame. Tests have been lower than the corresponding month of the previous year in 25 of the most recent 31 months. The average test decrease during these 25 months was 0.039 percentage points, while the average test increase in the remaining six months was 0.012 percentage points. Comparing Central Order data to U.S. butterfat averages (depicted on page 1) indicates a more substantial and persistent decline during this time frame, which may be attributable to the Central Order milkshed shifting further south in recent years.

Protein Test Data: Produce milk protein test averages for the Central Order, depicted in the lower graph on this page, averaged 3.049% over the first 10 years of regulation under the Central Order (2000 through 2009). The protein test data portrayed in this graph indicates an upward trend from 2000 through 2007, with a couple of minor dips along the way (2003 and 2005). This contrasts with butterfat tests for Central Order producer milk, which have exhibited a generally declining trend since the order was implemented in January 2000 (see the graph on page 2).

Producer Milk Protein Tests

Central Federal Milk Order

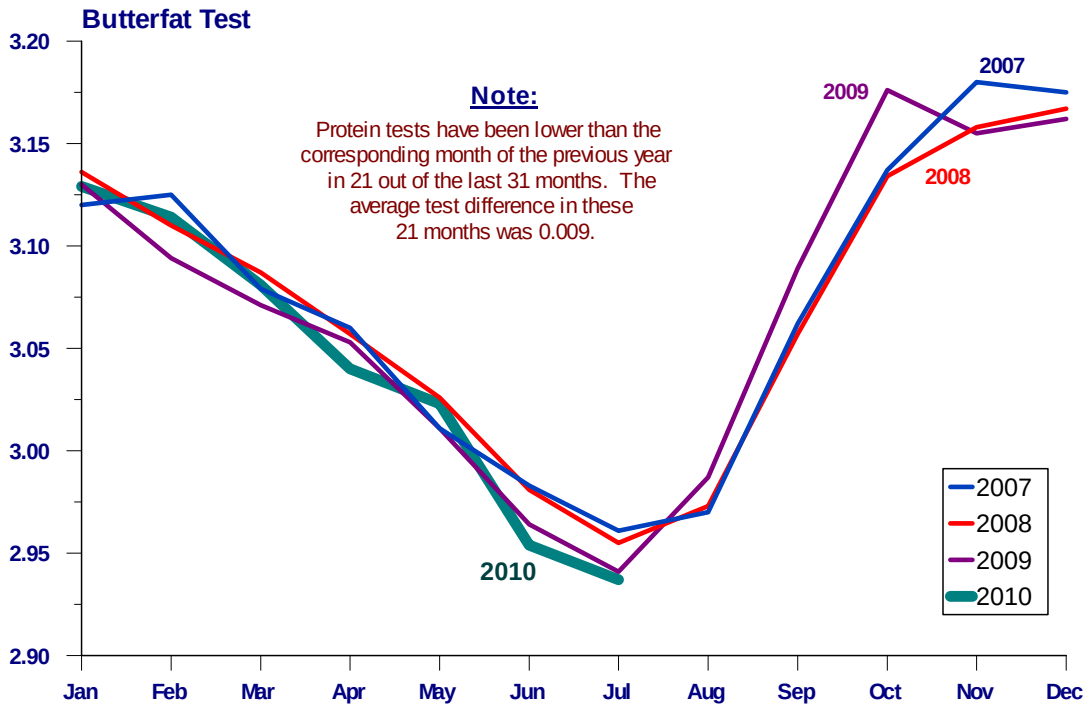


The upward tendency in Central Order protein tests has halted and reversed itself somewhat since the beginning of 2007. Yearly average protein tests in 2008 were identical to 2007

at 3.073%, but declined in 2009 to 3.064%. As indicated in the lower graph on page 3, Central Order protein test averages for 2010 through July were nearly identical to those for the comparable period of 2009.

Producer Milk Protein Tests

Central Federal Milk Order

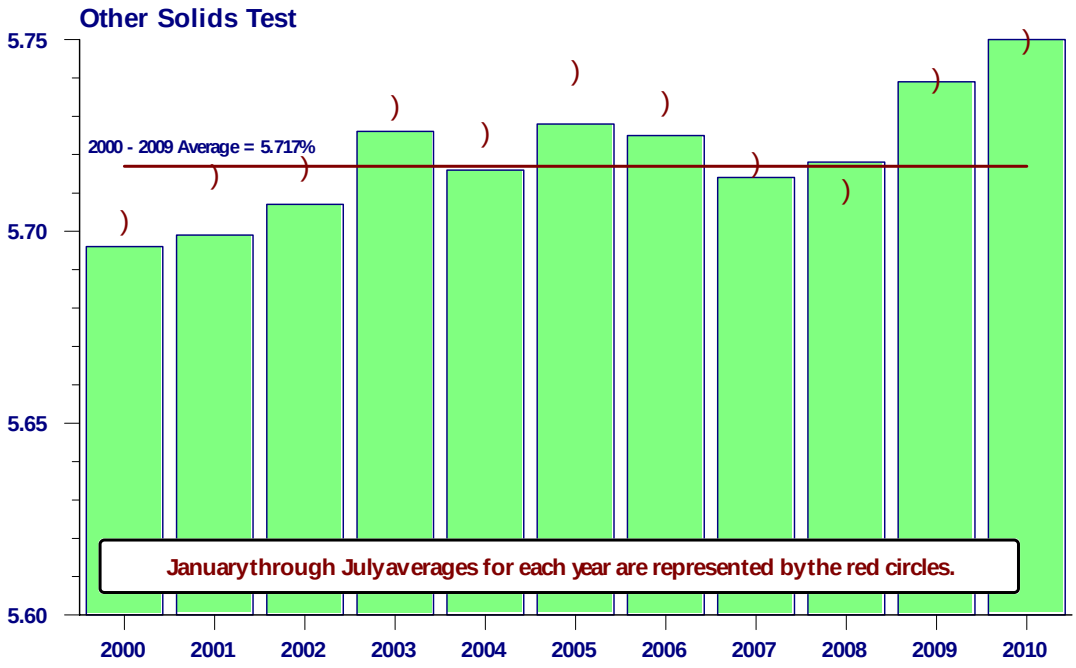


The top graph on this page details monthly protein tests for the Central Order from January 2007 through July 2010. Although this data indicates a decreasing trend similar to that of Central Order butterfat tests, the results are significantly less pronounced. Monthly protein tests have been lower than the corresponding month of the previous year in 21 of the most recent 31 months, but the test difference average of 0.009 percentage points in these 21 months was substantially less than the decrease previously noted for butterfat (0.039 percentage points).

Other Solids Test Data: Other solids test data for the Central Order are depicted in the lower graph on this page and the top graph on page 5. Other solids, butterfat, and protein are specific components of raw milk for which producers receive payment under the provisions of the Central Order. The other solids category includes all of the solids remaining in milk after the butterfat and protein are eliminated. Lactose accounts for the bulk of the other solids category, with the remainder comprised of mineral matter sometimes referred to as ash.

Producer Milk Other Solids Tests

Central Federal Milk Order

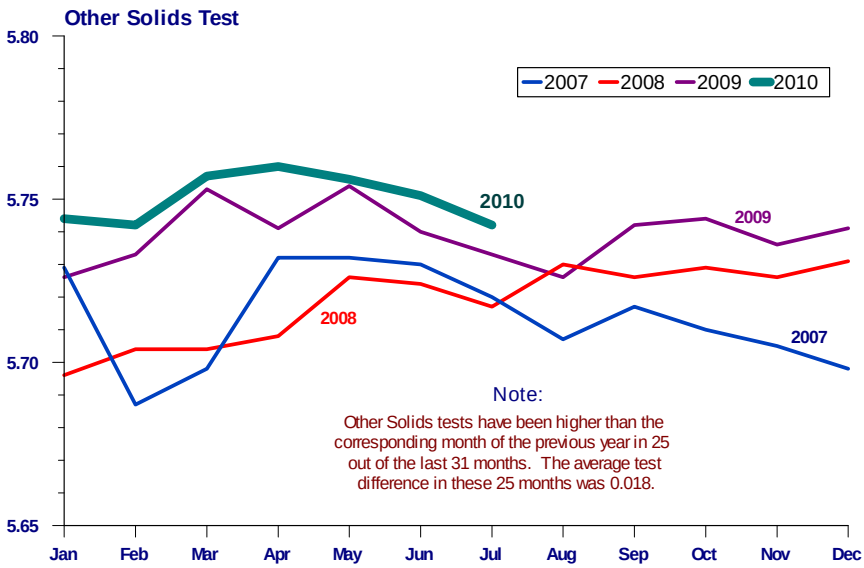


The other solids graph on this page details average test data and depicts an increasing trend in these tests since 2000. Average tests have increased over the previous year in 6 of the previous 10 years, with 2010 data through July indicating another increase is likely for the current year. Other solids tests have risen from 5.696% in 2000 to 5.740% during 2009, an increase of 0.044 percentage points.

The top graph on this page depicts monthly other solids test data for the Central Order for January 2007 through July of this year. These tests have exhibited a persistent upward trend during this time period, with tests higher than the corresponding month of the previous year in 25 of the most recent 31 months. The average increase during these 25 months was 0.018 percentage points, compared to an average decrease of 0.013 percentage points during the remaining six months. Over the most recent 24 months, other solids tests have been higher than the corresponding month of the previous year in all but one month for the Central Order.

Producer Milk Other Solids Tests

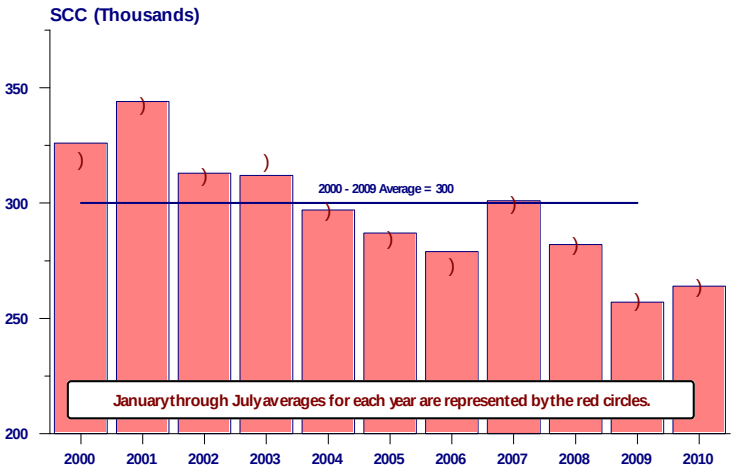
Central Federal Milk Order



Somatic Cell Count Data: In addition to payments for the butterfat, protein, and other solids components marketed in raw milk, Central Order producers also receive a Producer Price Differential (PPD) payment and a payment adjustment based on the somatic cell count (SCC) of their milk. While payments for components are on a per pound basis, the PPD and SCC adjustment are based on total hundredweights of milk marketed.

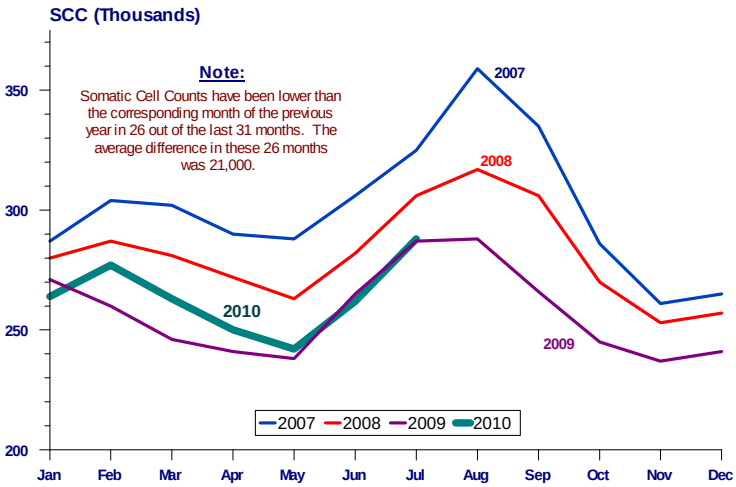
Producer Milk Somatic Cell Counts

Central Federal Milk Order



Producer Milk Somatic Cell Counts

Central Federal Milk Order



The middle graph on this page depicts average SCC data for the Central Order. The data indicates an overall downward trend in the SCC since 2000, with a 10-year average of 300,000. The average for the period 2000 through 2003 was above the 10-year average, while it has been below this level each year since 2003, with the exception of 2007 when it averaged 301,000.

The bottom graph on this page emphasizes the downward trend in SCCs for the Central Order, with counts lower than the corresponding month of the previous year in 26 of the most recent 31 months. The average decrease during these 26 months was 21,000. However, all five of the months with year-over-year increases during this 31-month period have occurred during 2010.

	Statistical Uniform Price		Producer Price Differential		Class I Utilization	
	July '10	June '10	July '10	June '10	July '10	June '10
Northeast	17.43	16.73	3.69	3.11	40.22	38.61
Appalachian	18.54	17.68	-----	-----	68.62	63.42
Florida	20.87	19.85	-----	-----	89.52	83.72
Southeast	18.37	17.64	-----	-----	67.30	62.13
Upper Midwest	14.39	14.14	0.65	0.52	12.07	11.48
Central	**15.63**	**15.18**	**1.89**	**1.56**	**31.64**	**30.75**
Mideast	16.12	15.60	2.38	1.98	39.64	36.34
Pacific Northwest	15.67	15.18	1.93	1.56	26.23	26.84
Southwest	16.53	16.16	2.79	2.54	34.23	32.88
Arizona	16.14	15.68	-----	-----	33.14	29.28

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