Federal Milk Market Administrator U.S. Department of Agriculture



# UPPER MIDWEST DAIRY NEWS

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#### **Inside This Issue:**

Somatic Cell Counts in the Milk Supply 2016	2
Computation of Producer Price Differential	6
Utilization and Classification	7
Commodity Prices and Market Statistics	8
Class Prices and Producer Prices	9



## CME Dairy Markets Down in December

Prices for cheese dropped sharply in the last month on the Chicago Mercantile Exchange (CME), with the butter and nonfat dry milk (NFDM) prices also down. (See Graph 1 on Page 2.)

The barrel cheddar cheese price at the CME on December 20 was \$1.40 per pound, down 24¢ from a month ago and 25½¢ below year-earlier levels. The barrel price is at its lowest level since late July.

The 40-pound block cheddar cheese price of \$1.43½ per pound on December 20 was 16½¢ below last month and down 35¢ from a year ago. The block price is at its lowest level since late March.

The barrel cheese price spent much of the month uncharacteristically above the block price, by as much as  $22 \frac{1}{2} \phi$ , before regaining its "typical" position late in the month of being  $3\phi$  to  $5\phi$  below the block price.

The CME butter price on December 20 was  $\$2.19\frac{1}{2}$  per pound, down  $1\frac{1}{2}$ ¢ from last month and  $2\frac{1}{2}$ ¢ below a year earlier. The butter price has been on a general downward trend since reaching its peak for 2017 in early August at  $\$2.73\frac{3}{4}$ .

The price of NFDM on the CME on December 20 was \$0.64\% per pound, down 6%% from last month, and 37%% below a year ago. The NFDM market has also been on a downward trend, since it hit \$0.95\% on the last day of May, and is currently at historically low levels.

The November Federal order Class III price was \$16.88 per cwt., up \$0.19 from October and \$0.12 above November 2016. On December 20, the CME Class III futures market has the December price dropping to \$15.44, then dropping below \$14 for the next several months.

# Happy Holiday

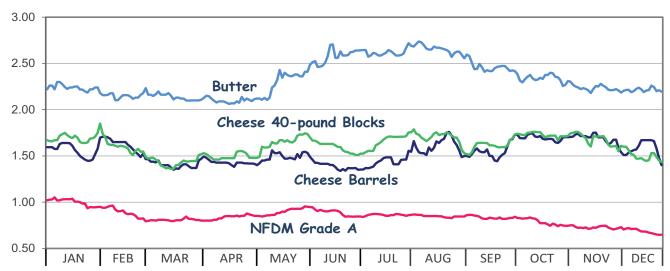
### Pool Summary

- ➤ In November, producer milk totaled 2.1 billion pounds, down 1% from last month, but 13% above last year. During the month, an estimated 1.3 billion pounds of eligible milk was not pooled because of class price relationships.
- ➤ Class I utilization totaled 281 million pounds, up 4.7% on a daily basis from October, but 4.0% below last year. In November, Class I usage accounted for 13.4% of producer milk.
- ➤ The November Producer Price Differential (PPD) was \$(0.21) per cwt., its lowest level since last November.
- ➤ The Statistical Uniform Price was \$16.67 per cwt., up \$0.01 from October and \$0.43 above November 2016.
- ➤ Market statistics for November are shown on Pages 6 and 7.

## November 2017 Producer Milk by Class

		Product	
	Percent	Pounds	Price
			\$/cwt.
Class I	13.4	281,287,066	18.21
Class II	8.0	168,409,790	15.32
Class III	72.4	1,519,920,828	16.88
Class IV	6.2	129,825,163	13.99
Total		2,099,442,847	



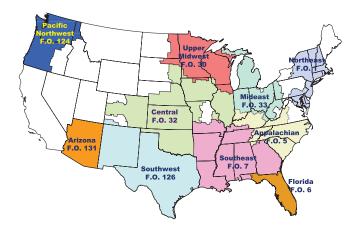


<sup>\*</sup> Prices depicted are dollars per pound for each day that trading occurred from January 1, 2017 through December 20, 2017.

# Somatic Cell Counts in the Milk Supply \*

soon to be released study by the U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) looks at milk quality in the United States. In conjunction with USDA's Agricultural Marketing Service (AMS) and the National Mastitis Council's Milk Quality Monitoring Committee, APHIS' Center for Epidemiology and Animal Health monitors U.S. milk quality using data from bulk-tank somatic cell counts (BTSCCs). Data are provided by four of the ten Federal milk orders (FMO): the Upper Midwest, Central, Mideast, and Southwest (Figure 1). The remaining six FMOs do not collect BTSCC data.

Figure 1: Federal Milk Marketing Order Areas



BTSCCs are the number of white blood cells (primarily macrophages and leukocytes), secretory cells, and squamous cells per milliliter of raw milk. BTSCCs are used as a measure of milk quality and as indicators of overall udder health.

There is an inverse relationship between BTSCCs and cheese yield and the quality/shelf-life of pasteurized fluid milk. Numerous studies have also shown that operations with increased BTSCCs are more likely to have milk that violates antibiotic residue standards. The most frequently cited reason for antibiotic residues in milk is placing cows treated with antibiotics in the milking string before the recommended withdrawal period.

To ensure high-quality dairy products, BTSCCs are monitored in milk shipments using standards outlined in the U.S. Pasteurized Milk Ordinance (PMO). In the United States, the legal maximum BTSCC for Grade A milk shipments is 750,000 cells/mL. If a producer has two out of four shipments that test above the maximum (usually tested 30 to 45 days apart) a written notice is issued and an additional sample is tested within 21 days. If three of the last five counts exceed the maximum, regulatory action is required, which includes:

- Suspending the producer's permit,
- Foregoing permit suspension, provided the milk in violation is not sold as Grade A, or

➤ Imposing a monetary penalty in lieu of permit suspension, provided the milk in violation is not sold or offered for sale as Grade A.

Maximum BTSCC levels for other countries include 400,000 cells/mL in the European Union (EU), Australia, New Zealand, and Canada. Although there has been increasing support in the last few years for lowering the maximum BTSCC for Grade A milk in the U.S. to 400,000 cells/mL, no changes have been made to the PMO.

If U.S. producers have four consecutive rolling 3-month BTSCC means greater than the 400,000 cells/mL limit, they cannot export milk to the EU unless derogation is requested and approved. If derogation is not approved, the milk supplier must suspend, segregate, or discontinue certification. A few states have reduced the BTSCC limit for producers in their states. These states are California, Idaho, Oregon, and Washington.

The EU also regulates bacterial standard plate counts. For these regulations, a 2-month geometric mean is used based on a minimum of two standard plate counts performed per month. The bacterial limit for the EU is 100,000 bacteria/mL, which is also the limit for Grade A milk in the U.S.; however, the U.S. and the EU calculate compliance differently.

#### Monitored Federal Milk Orders

In 2016, milk from the Upper Midwest, Central, Mideast, and Southwest Federal Milk Orders (FMOs) was monitored. In total these FMOs monitored milk from 24,131 producers and accounted for 94.6 billion pounds (44.6 percent) of the 212.4 billion pounds of milk produced in the US in 2016. For the first time since 2007, the pounds of milk monitored by the FMOs decreased. Producers in 29 States marketed at least one milk shipment through the monitored FMOs during 2016.

Of the 24,131 producers that shipped milk to the four FMOs in 2016, 58.6 percent were from the Upper Midwest while only 2.4 percent were from the Southwest order. A total of 237,966 milk shipments were monitored (Table 1) with 133,000 or 55.9 percent coming from the Upper Midwest. The Upper Midwest FMO accounted for 40.1 percent of milk monitored by the four FMOs and 17.9 percent of all milk produced in the U.S.

#### 2016 BTSCC Trends

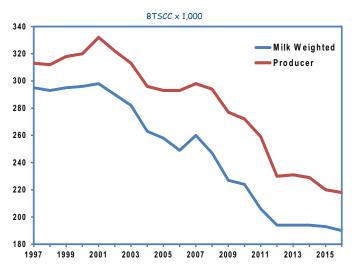
In 2016, the milk-weighted geometric BTSCC mean in the U.S. was 190,000 cells/mL, a slight decrease from 2015 (Figure 2). Milk-weighted BTSCCs take into account the amount of milk shipped by a producer, resulting in an overall BTSCC mean of monitored milk. The producer shipment

Table 1: Number and Percentage of Producers, Shipments and Milk Marketed During 2016

	Upper			South-	
	Midwest	Central	Mideast	west	Total
Producers					
Number	14,157	3,422	5,977	575	24,131
Percent	58.6	14.2	24.8	2.4	100.0
Shipments					
Number (x 1,000)	133.0	34.5	63.9	6.5	238.0
Percent	55.9	14.5	26.9	2.7	100.0
Milk					
Billion Pounds	37.9	17.7	20.9	18.1	94.6
Percent Monitored	40.1	18.7	22.1	19.1	100.0
Percent of U.S. Production	17.9	8.3	9.9	8.5	44.6

BTSCC -- which is a geometric, nonmilk-weighted mean of all shipments -- was 219,000 cells/mL, similar to 2015.

Figure 2: Milk-Weighted and Producer BTSCC — 1997-2016



#### Evaluating BTSCC Levels

In 2016, over 99 percent of milk and shipments monitored met the current PMO limit of 750,000 cells/mL (Table 2). During all months monitored, BTSCCs in 96 percent of milk were less than 400,000 cells/mL; 70 percent of producers

Continued on Page 4

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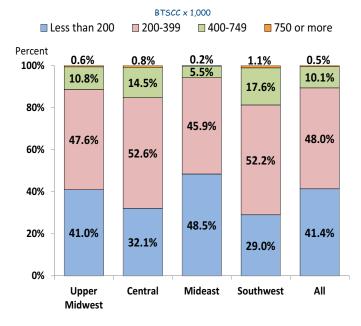
Table 2: Percentage of Milk, Shipments, and Producers by BTSCC Level During 2016

BTSCC (x1,000 cells/mL)	Milk (94.6 billion pounds)	<b>Shipments</b> (237,966)	Producers (24,131)
Less than 100	5.9	6.4	1.4
Less than 200	55.5	41.4	18.5
Less than 400	96.0	89.4	70.0
Less than 650	99.7	98.8	94.6
Less than 750	99.9	99.5	97.1

shipped milk below this limit for the entire year. Of the 24,131 producers, 97.1 percent shipped milk with BTSCCs below 750,000 cells/mL during all months monitored.

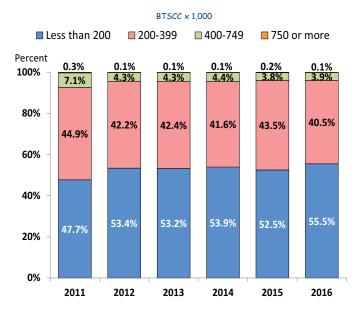
In 2016, about 50 percent of shipments in all monitored FMOs had BTSCCs between 200,000 and 399,000 cells/mL . More than 90 percent of shipments in the Mideast FMO (94.4 percent) and more than 80 percent of shipments in the other three FMOs were below 400,000 cells/mL (Figure 3).

Figure 3: Percentage of Shipments, by FMO, and by BTSCC — 2016



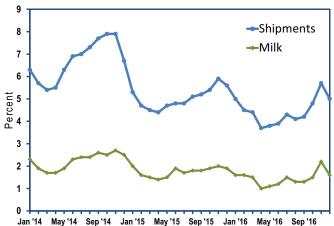
From 2011 to 2016, the percentage of total milk shipped with BTSCCs less than 200,000 cells/mL increased from 47.7 to 55.5 percent (Figure 4). The percentage of total milk with counts less than 400,000 cells/mL increased from 92.6 to 96.0 percent from 2011 to 2016.

Figure 4: Percentage of Total Milk Shipped through the Four Monitored FMOs, by BTSCC and by Year



Criteria for the EU Health Certification Program from USDA-AMS is based on a 3-month geometric mean BTSCC. Shipments for which the 3-month geometric mean is above 400,000 cells/ml for 4 consecutive months are considered to be noncompliant. Less than 6.5 percent of monitored US shipments and 3 percent of monitored milk were noncompliant during 2016 (Figure 5).

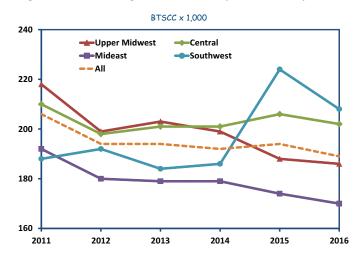
Figure 5: Percentage of Milk and Shipments from 2014 to 2016 that Would Not Have Met the EU Program's BTSCC Criteria, by Month



#### FMO and State BTSCC Trends

Overall, BTSCCs have decreased since 2011, even though the declines have leveled out since 2012 (Figure 6). Sixteen States marketed 60 percent or more of the milk produced in their States

Figure 6: Milk-Weighted BTSCCs by FMO and by Year



through the monitored FMOs and accounted for 96.6 percent of the monitored milk in the four FMOs (Table 3). Wisconsin, Texas, Michigan, Minnesota, and New Mexico accounted for 69.3 percent of all FMO-monitored milk. Shown in the 2016 column of the table is the direction of change from the 2015 for each state. Compared with 2015, 9 of the 16 States had decreased BTSCCs in 2016; 6 States had increased counts, and 1 State was unchanged.

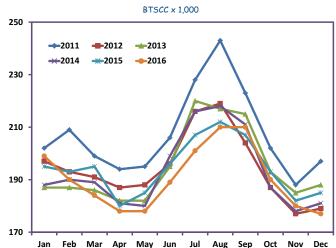
Table 3: Milk-Weighted BTSCCs for States Shipping 60 Percent or More of their Total Milk Production through the Four Monitored FMOs

	% of Total	BTSCC (x1,000) by Year							
State	Monitored Milk2016	2011	2012	2013	2014	2015	2016		
СО	4.1	186	168	184	193	189	185↓		
IL	1.7	241	214	215	209	205	209 ↑		
IN	3.2	204	197	198	201	200	192↓		
IA	6.2	228	206	211	214	204	199↓		
KS	2.5	205	204	199	199	212	196↓		
MI	11.9	167	156	158	160	156	157 ↑		
MN	7.8	227	205	210	207	196	198 ↑		
NE	1.4	182	182	177	171	171	177 ↑		
NM	9.3	167	175	166	170	209	199↓		
ND	0.2	276	243	237	222	182	168↓		
ОН	5.5	220	202	198	195	187	182 ↓		
OK	0.5	326	322	288	287	302	307 ↑		
SD	1.9	247	220	226	232	207	218 ↑		
TX	12.6	208	207	199	196	235	214 ↓		
WI	27.7	218	199	202	196	185	185		
WY	0.1	127	124	143	147	128	125↓		
16 States	96.6	206	193	194	192	194	189 ↓		

#### Seasonal BTSCC Trends

Monthly monitoring continues to show that BTSCCs peak during summer (June through September) when higher temperatures and humidity increase stress on cows and provide conditions more favorable for bacterial growth (Figure 7). In 2016, monthly milk-weighted BTSCCs were highest during August and September (210,000 cells/mL) and lowest in April and May (178,000 cells/mL).

Figure 7: Milk-Weighted BTSCCs by Year and by Month



#### Summary

BTSCCs from monitored FMOs are indicative of the quality of the Nation's milk supply. The milk-weighted mean BTSCC from the four monitored FMOs was 190,000 cells/mL in 2016. Overall BTSCCs have decreased since 2011. The BTSCCs for all four of the FMOs decreased between 2015 and 2016. Ten of the 16 States shipping 60 percent or more of their milk through the 4 FMOs had the same or lower BTSCCs in 2016 compared with 2015.

In addition to influencing improvements in U.S. dairy management practices, the current EU import regulations may be partially responsible for the decrease in BTSCCs and the corresponding improvement in milk quality since 2011.

https://www.aphis.usda.gov/

<sup>\*</sup> Adapted from a soon to be published USDA Animal and Plant Health Inspection Services (APHIS) article "Determining U.S. Milk Quality Using Bulk-tank Somatic Cell Counts, 2016". When published, it will be available by clicking on the link below:

## Computation of Producer Price Differential - November 2017

		Utilization Percentage	Product Pounds	Component Pounds	Rate	Value
Class I	Differential Value					\$ 4,885,784.17
	Product	13.4%	281,287,066			
	Skim Milk			276,433,492	\$ 7.2800	20,124,358.23
	Butterfat			4,853,574	2.6804	13,009,519.74
Class II	Product	8.0%	168,409,790			
	Nonfat Solids			14,781,794	0.7311	10,806,969.60
	Butterfat			9,775,601	2.5616	25,041,179.52
Class III	Product	72.4%	1,519,920,828			
	Protein			48,769,058	2.3412	114,178,118.62
	Other Solids			87,313,845	0.1644	14,354,396.10
	Butterfat			58,359,842	2.5546	149,086,052.37
Class IV	Product	6.2%	129,825,163			
	Nonfat Solids			11,065,836	0.5816	6,435,890.20
	Butterfat			10,965,906	2.5546	28,013,503.47
SCC Adjus	tment (Class II, III, and	IV)				2,921,863.32
Total Prod	lucer Milk *		2,099,442,847			\$ 388,857,635.34
Add:	Overage Inventory Reclassifier Other Source Milk §.0 Other Source Milk §.0	60(h)				28,073.65 87,665.01 0.00 0.00
Subtract:	Transportation Credit Assembly Credit Credit for Reconstitut Producer Milk Proteir Producer Milk Other Producer Milk Butterf Producer Milk SCC A	red FMP n Solids at				13,086.32 224,555.65 0.00 157,533,370.92 19,791,089.36 214,471,246.28 3,366,501.90
Total Milk a	and Value		2,099,442,847			\$ (6,426,476.43)
Add:	Location Adjustment One-Half Unobligated		regulated Supply Plan Settlement Fund	t Milk		1,447,983.77 1,417,053.01
Total Value	•				(0.169637)	\$ (3,561,439.65)
Subtract:	Producer Settlement	Fund Reserve			0.040363	847,390.33
Produce	er Price Differentia	al **			\$(0.21)	\$ (4,408,829.98

An estimated 1.3 billion pounds of milk was not pooled.

# Upper Midwest Pool Statistics - November 2017

Market Class I Differential Rate	Pool Plants	Received at Pool Plants	Diverted to Pool and Nonpool Plants	Total	Location Adjustment to Producers		Differential andlers
Cwt.	Number	Pounds	Pounds	Pounds	Value	Pounds	Value
\$1.80	4	86,624,436	1,291,209	87,915,645	\$ 0	79,074,458	\$1,423,340
\$1.75	32	107,713,145	1,058,172,966	1,165,886,111	582,487	65,004,538	1,137,579
\$1.70	28	216,969,303	585,312,079	802,281,382	800,457	121,862,637	2,071,665
\$1.65	3	17,440,121	25,919,588	43,359,709	65,040	15,345,433	253,200
Total	67	428,747,005	1,670,695,842	2,099,442,847	\$1,447,984	281,287,066	\$4,885,784

<sup>\*\*</sup> Producer Price Differential is dollars per cwt. at the Base Zone of Cook County, Illinois.

## Utilization and Classification of Milk

	November 2017		October 2017	November 2016	
	Product Pounds	Butterfat Pounds	Product Pounds	Product Pounds	
Class I Utilization:					
Packaged Disposition					
Milk	50,625,387	1,673,425	48,976,105	50,617,114	
Flavored Milk	2,532,888	84,699	2,660,950	2,843,237	
Reduced Fat Milk	102,782,934	1,988,904	100,327,254	105,993,815	
Lowfat Milk	50,165,735	472,615	51,342,372	52,838,240	
Fat Free Milk	39,455,466	33,214	39,605,368	44,840,719	
Flavored Reduced and Fat Free Milk	31,682,418	370,169	33,472,032	31,763,366	
Buttermilk	2,220,175	21,949	2,052,664	3,312,510	
Total Packaged Disposition	279,465,003	4,644,975	278,436,745	292,209,001	
Total Ending Inventory	25,224,638	411,306	21,541,107	21,412,597	
Bulk to Nonpool Plants	279,972	5,246	515,332	2,212,533	
Shrinkage	1,616,533	195,555	1,327,459	1,057,748	
Total Class I Utilization	306,586,146	5,257,082	301,820,643	316,891,879	
Other Order Plants	(3,251,468)	(57,624)	(3,228,467)	(2,333,974)	
Beginning Inventory	(21,541,107)	(336,603)	(20,836,304)	(20,867,143)	
Reused Products	0	0	0	0	
Other Source Milk	(495,298)	(8,050)	(557,641)	(549,321)	
Overage	0	0	0	0	
Interhandler Adjustment	(11,207)	(1,231)	487,650	(18,120)	
Class I Producer Milk	281,287,066	4,853,574	277,685,881	293,123,321	
Class II Utilization:					
Total Class II Utilization	178,506,054	10,893,732	187,635,583	174,041,959	
Other Order Plants	0	0	0		
Beginning Inventory	(2,013,284)	(144,846)		(950,586)	
Reused Products	(6,657,122)	(3,865)	(7,653,883)	(7,038,051)	
Other Source Milk	(1,425,858)	(969,420)	(1,299,214)		
Overage					
Class II Producer Milk	168,409,790	9,775,601	178,682,486	166,053,322	
Class III Utilization:					
Total Class III Utilization	1,534,059,129	58,503,416	1,619,007,300	1,280,093,781	
Other Order Plants	(0.055.000)	(00.700)	(0.000.000)	(861,321)	
Beginning Inventory Reused Products	(3,655,666)	(38,798)	(2,093,309)	(5,562,496)	
Other Source Milk	(10,394,016)	(101,992)	 (4,561,295)	(4,647,863)	
Overage	(88,619)	(2,784)	(21,767)	(47,115)	
Class III Producer Milk	1,519,920,828	58,359,842	1,612,330,929	1,268,974,986	
	1,519,920,626	36,339,642	1,612,330,929	1,200,974,900	
Class IV Utilization:					
Total Class IV Utilization	210,482,282	14,602,595	203,367,320	203,874,181	
Other Order Plants	(6,288,416)	(381,923)	(5,635,695)	(7,386,432)	
Beginning Inventory	(13,319,164)	(836,784)	(13,278,546)	(15,369,765)	
Reused Products	(04.004.440)	(2.442.275)	(00.700.007)	(47,000,004)	
Other Source Milk Overage	(61,034,113) (15,426)	(2,413,375) (4,607)	(60,733,687) (36,772)	(47,229,281) (16,871)	
Class IV Producer Milk	129,825,163	10,965,906	123,682,620	133,871,832	
Total Producer Milk All Classes	2,099,442.847	83,954,923	2,192,381.916	1,862,023,461	
Total Producer Milk All Classes Restricted Information	2,099,442,847	83,954,923	2,192,381,916	1,862,023,46	

# **Commodity Prices**

		Weigl	nted Monthl	Prices	Weighted Two-Week Average Prices							
	Cł	neddar Chee	ese	Nonfat			Ch	eddar Che	ese	_		
Month/Year	Blocks	Barrels	Average	Butter	Dry Milk	Dry Whey	Blocks	Barrels	Average	Butter	Dry Milk	Dry Whey
			Dollars p	er Pound					Dollars <sub>l</sub>	per Pound		
Nov 2016	1.7769	1.7087	1.7596	1.9092	0.9119	0.3690	1.7799	1.7286	1.7706	1.9142	0.9105	0.3706
Dec	1.8382	1.7208	1.7990	2.1000	0.9579	0.3994	1.8600	1.7126	1.8052	2.1016	0.9615	0.3981
Jan 2017	1.7189	1.6493	1.7011	2.2568	1.0229	0.4421	1.7228	1.6466	1.7027	2.2518	1.0198	0.4322
Feb	1.7103	1.6321	1.6871	2.1760	0.9926	0.4894	1.7216	1.6236	1.6889	2.1887	0.9875	0.4876
Mar	1.5417	1.5380	1.5551	2.1679	0.8493	0.5239	1.5697	1.5581	1.5793	2.1932	0.8506	0.5235
Apr	1.4955	1.4664	1.4960	2.1160	0.8386	0.5243	1.4831	1.4634	1.4884	2.1315	0.8294	0.5315
May	1.5626	1.4852	1.5390	2.1644	0.8704	0.5094	1.5309	1.4627	1.5120	2.1114	0.8620	0.5124
Jun	1.6985	1.5287	1.6293	2.4065	0.9137	0.4917	1.7101	1.5399	1.6412	2.4186	0.9208	0.4962
Jul	1.6106	1.4406	1.5430	2.6039	0.8991	0.4514	1.5997	1.4190	1.5266	2.6256	0.9026	0.4489
Aug	1.7297	1.5667	1.6664	2.6578	0.8733	0.4345	1.7404	1.5634	1.6698	2.6728	0.8785	0.4324
Sep	1.6744	1.6176	1.6608	2.5298	0.8499	0.4167	1.6747	1.6291	1.6668	2.5315	0.8565	0.4211
Oct	1.7170	1.7032	1.7254	2.3718	0.8099	0.3790	1.6801	1.6751	1.6932	2.3849	0.8274	0.3829
Nov	1.7475	1.7450	1.7617	2.2810	0.7553	0.3587	1.7457	1.7511	1.7641	2.2636	0.7563	0.3561
Dec							1.6241	1.6500	1.6513	2.2256	0.7290	0.2995
							<u> </u>					

	Ch	icago Merca	intile Exchan	ge	USDA Dairy Market News					
	Butter			NFDM	NFDM Low/Medi	um Heat	Whey Powder			
Month/Year	Grade AA			Grade A	Central & East	West	Northeast	Central	West	
					Dollars per Pound					
Nov 2016	1.9899	1.8775	1.7424	0.8914	0.9268	0.8987	0.3828	0.3558	0.3910	
Dec	2.1763	1.7335	1.6132	1.0019	0.9874	0.9879	0.4088	0.3782	0.4065	
Jan 2017	2.2393	1.6866	1.5573	1.0043	1.0143	1.0163	0.4519	0.4410	0.4718	
Feb	2.1534	1.6199	1.6230	0.9000	0.9721	0.9455	0.4896	0.4876	0.5009	
Mar	2.1392	1.4342	1.4072	0.8080	0.8838	0.8497	0.4898	0.4908	0.5078	
Apr	2.0992	1.4976	1.4307	0.8347	0.8450	0.8263	0.4966	0.4938	0.5050	
May	2.2684	1.6264	1.4806	0.8888	0.8750	0.8759	0.4845	0.4784	0.4716	
Jun	2.5688	1.6022	1.3972	0.8902	0.9267	0.9145	0.4532	0.4625	0.4591	
Jul	2.6195	1.6586	1.4396	0.8616	0.9023	0.8788	0.4266	`0.4258	0.4329	
Aug	2.6473	1.6852	1.5993	0.8491	0.8952	0.8633	0.4075	0.3970	0.4040	
Sep	2.4370	1.6370	1.5691	0.8320	0.8775	0.8531	0.3904	0.3721	0.3873	
Oct	2.3293	1.7305	1.6970	0.7761	0.8355	0.8052	0.3607	0.3355	0.3543	
Nov	2.2244	1.6590	1.6656	0.7234	0.7555	0.7452	0.3417	0.3095	0.3295	

## Market Statistics

Month/Year	Distributing Plants	Supply Plants	Coop .9(c) Handlers	Producers	Total Producer Milk	Est. Average Daily Delivery Per Producer	Class I Utilization	Butterfat Test	Protein Test	Other Solids Test	Weighted Average SCC
					Mil. Ibs.	Pounds	Percent	Percent	Percent	Percent	(000)
Sep 2016	17	50	14	9,465	2,313	8,140	12.6	3.77	3.08	5.77	224
Oct	17	50	13	10,132	2,771	8,820	10.2	3.87	3.16	5.72	206
Nov	17	50	14	8,336	1,862	7,439	15.7	3.88	3.18	5.72	194
Dec	18	50	14	8,464	2,109	8,034	14.5	3.95	3.21	5.72	193
Jan 2017	17	50	14	9,166	2,543	8,941	11.4	3.91	3.17	5.75	193
Feb	15	49	12	8,897	2,251	9,030	11.5	3.86	3.13	5.75	190
Mar	17	48	12	9,449	2,936	10,022	9.9	3.88	3.14	5.75	190
Apr	17	48	12	9,951	3,080	10,313	8.4	3.84	3.10	5.76	190
May	17	47	12	8,752	2,458	9,057	11.4	3.79	3.08	5.76	189
Jun	17	48	12	9,389	2,740	9,721	9.1	3.73	3.04	5.77	199
Jul	16	47	11	10,043	3,020	9,693	8.1	3.70	3.03	5.76	208
Aug	15	50	12	10,541	3,220	9,828	8.3	3.74	3.07	5.78	205
Sep	16	49	12	10,716	3,190	9,897	8.4	3.80	3.10	5.79	196
Oct	17	50	12	8,729	2,192	8,099	12.7	3.86	3.13	5.75	182
Nov	18	49	12		2,099		13.4	4.00	3.21	5.73	168

# Class Prices

	Clas	s I Price M	over	Class I Pri	ce at Cook	County, IL		Class I	l Price		
Month/Year	Butterfat	Skim Milk	3.50%	Butterfat	Skim Milk	3.50%	Butterfat	Nonfat Solids	Skim Milk	3.50%	
	lb.	cwt.	cwt.	lb.	cwt.	cwt.	lb.	lb.	cwt.	cwt.	
Nov 2016	2.0749	7.79	14.78	2.0929	9.59	16.58	2.1114	0.8300	7.47	14.60	
Dec	2.1104	9.84	16.88	2.1284	11.64	18.68	2.3424	0.8133	7.32	15.26	
Jan 2017	2.3374	9.61	17.45	2.3554	11.41	19.25	2.5323	0.8633	7.77	16.36	
Feb	2.5192	8.20	16.73	2.5372	10.00	18.53	2.4344	0.9211	8.29	16.52	
Mar	2.4428	8.65	16.90	2.4608	10.45	18.70	2.4246	0.8889	8.00	16.21	
Apr	2.4483	7.75	16.05	2.4663	9.55	17.85	2.3618	0.7533	6.78	14.81	
May	2.3736	7.14	15.20	2.3916	8.94	17.00	2.4204	0.7333	6.60	14.84	
Jun	2.3492	7.34	15.31	2.3672	9.14	17.11	2.7136	0.7656	6.89	16.15	
Jul	2.7212	7.32	16.59	2.7392	9.12	18.39	2.9526	0.8233	7.41	17.48	
Aug	2.9719	6.55	16.72	2.9899	8.35	18.52	3.0179	0.8056	7.25	16.57	
Sep	3.0291	6.33	16.71	3.0471	8.13	18.51	2.8629	0.7811	7.03	16.80	
Oct	2.8580	6.67	16.44	2.8760	8.47	18.24	2.6716	0.7600	6.84	15.95	
Nov	2.6804	7.28	16.41	2.6984	9.08	18.21	2.5616	0.7311	6.58	15.32	
Dec	2.5335	8.30	16.88	2.5515	10.10	18.68		0.6600	5.94		
Jan 2018	2.4875	6.98	15.44	2.5055	8.78	17.24		0.6333	5.70		

	Class III Price					Class IV Price				
Month/Year	Butterfat	Protein	Other Solids	Skim Milk	3.50%	Butterfat	Nonfat Solids	Skim Milk	3.50%	
	lb.	lb.	lb.	cwt.	cwt.	lb.	lb.	cwt.	cwt.	
Nov 2016	2.1044	2.8085	0.1750	9.74	16.76	2.1044	0.7367	6.63	13.76	
Dec	2.3354	2.6922	0.2063	9.56	17.40	2.3354	0.7822	7.04	14.97	
Jan 2017	2.5253	2.1768	0.2503	8.22	16.77	2.5253	0.8465	7.62	16.19	
Feb	2.4274	2.2348	0.2990	8.69	16.88	2.4274	0.8166	7.35	15.59	
Mar	2.4176	1.8198	0.3345	7.61	15.81	2.4176	0.6747	6.07	14.32	
Apr	2.3548	1.6955	0.3350	7.23	15.22	2.3548	0.6641	5.98	14.01	
May	2.4134	1.7723	0.3196	7.38	15.57	2.4134	0.6956	6.26	14.49	
Jun	2.7066	1.7545	0.3014	7.22	16.44	2.7066	0.7384	6.65	15.89	
Jul	2.9456	1.2248	0.2599	5.33	15.45	2.9456	0.7240	6.52	16.60	
Aug	3.0109	1.5536	0.2425	6.25	16.57	3.0109	0.6984	6.29	16.61	
Sep	2.8559	1.6988	0.2241	6.59	16.36	2.8559	0.6753	6.08	15.86	
Oct	2.6646	2.1084	0.1853	7.63	16.69	2.6646	0.6357	5.72	14.85	
Nov	2.5546	2.3412	0.1644	8.23	16.88	2.5546	0.5816	5.23	13.99	

# **Producer Prices**

Month/Year	Producer Price Differential	Statistical Uniform Price (at 3.50%)	Butterfat Price	Protein Price	Other Solids Price	SCC Adjustment Rate	Producer Mailbox Price (at test)	
	\$ per cwt.	\$ per cwt.	\$ per lb.	\$ per lb.	\$ per lb.	\$ per cwt.	\$ per cwt.	
Oct 2016	0.19	15.01	2.0493	2.2975	0.1351	0.00079	17.21	
Nov	(0.52)	16.24	2.1044	2.8085	0.1750	0.00088	18.69	
Dec	(0.19)	17.21	2.3354	2.6922	0.2063	0.00090	19.76	
Jan 2017	0.22	16.99	2.5253	2.1768	0.2503	0.00085	19.45	
Feb	0.06	16.94	2.4274	2.2348	0.2990	0.00084	19.09	
Mar	0.24	16.05	2.4176	1.8198	0.3345	0.00078	18.11	
Apr	0.15	15.37	2.3548	1.6955	0.3350	0.00075	17.30	
May	0.08	15.65	2.4134	1.7723	0.3196	0.00077	17.40	
Jun	0.12	16.56	2.7066	1.7545	0.3014	0.00081	17.85	
Jul	0.35	15.80	2.9456	1.2248	0.2599	0.00077	17.15	
Aug	0.23	16.80	3.0109	1.5536	0.2425	0.00083	18.22	
Sep	0.18	16.54	2.8559	1.6988	0.2241	0.00083	18.19	
Oct	(0.03)	16.66	2.6646	2.1084	0.1853	0.00086		
Nov	(0.21)	16.67	2.5546	2.3412	0.1644	0.00088		

## Summary of Federal Order Data - November 2017

Uniform or Statistical Uniform Price at 3.5% Butterfat

Happy \*\*
Holidays

	Federal Order Number / Name	Producer Deliveries Thousand	Class I Producer Receipts d Pounds	Class I Utilization Percent	Class I Price — Dollar	Producer Price Differential	FOB Market	FOB Cook Cty. Illinois  Dollars per C	Change From Previous Year
1	Northeast	2,180,743	766,319	35.1	\$ 19.66	\$ 0.26	\$ 17.14	\$ 15.69	\$ 0.80
5	Appalachian	479,025	354,234	73.9	19.81	n/a	18.63	17.03	1.15
6	Florida	218,101	183,961	84.3	21.81	n/a	20.66	17.06	1.23
7	Southeast	422,925	316,742	74.9	20.21	n/a	19.07	17.07	1.05
30	Upper Midwest	2,099,443	281,287	13.4	18.21	(0.21)	16.67	16.67	0.43
32	Central	1,015,729	412,364	40.6	18.41	(0.90)	15.98	15.78	0.58
33	Mideast	1,486,282	560,194	37.7	18.41	(0.64)	16.24	16.04	0.86
124	Pacific Northwest	581,631	158,716	27.3	18.31	(1.19)	15.69	15.59	0.62
126	Southwest	694,533	373,776	53.8	19.41	(0.12)	16.76	15.56	0.80
131	Arizona	385,179	109,418	28.4	18.76	n/a	16.02	15.47	0.50
All Market Average or Total *		9,563,593	3,517,010	36.8					

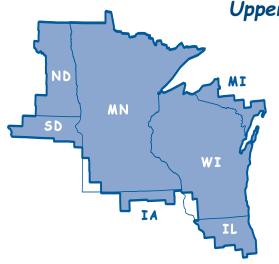
n/a = Not applicable.

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<sup>\*</sup> May not add due to rounding.