



The Market Administrator's

BULLETIN

NORTHEAST MARKETING AREA

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October Pool Price Calculation

The October 2022 statistical uniform price (SUP) for the Northeast Marketing Area was announced at \$24.77 per hundredweight for milk delivered to plants located in Suffolk County, Massachusetts (Boston), the pricing point for the Northeast Order. The statistical uniform price is calculated at 3.5 percent butterfat, 2.99 percent protein, and 5.69 percent other solids. If reported at the average tests of producer pooled milk, the SUP would be \$27.45 per hundredweight. The October statistical uniform price was 5 cents per hundredweight below the September price. The October producer price differential (PPD) at Suffolk County was \$2.96 per hundredweight, a decrease of \$2.04 from the previous month.

Product Prices Effect

Commodity prices reported on the National Dairy Product Sales Report were mostly up for September; only dry whey declined, and it was less than half of a cent. Butter rose over 7 cents per pound and set a record high at \$3.1911 per pound. Nonfat dry milk increased less than 1 cent. The cheese price jumped nearly 21 cents per pound due to a 16-cent increase in the block price combined with a nearly 24-cent increase in the barrel price. The commodity price changes translated to a 9-cent rise in the butterfat price (also a record high), a less than 1-cent increase in nonfat solids, and a less than 1-cent decline in other solids. The protein price jumped nearly 57 cents per pound mainly due to the cheese price increase.

Class prices were mixed: the Class I price fell 91cents; Class II decreased 78 cents; Class III rose \$1.99; and Class IV was up 33 cents, all on a per hundredweight basis. The spread between the higher- and lower-class prices tightened somewhat, lowering the PPD. The October SUP and the Class II and IV prices were the highest ever for the month.

Selected Statistics

Average daily deliveries per producer (DDP) set a record high for October. The total volume of producer receipts was the third highest for the month of October; Class III volume was the highest ever for the month. The average producer tests for butterfat and protein set record highs for October; the other solids test tied with 2020 as the highest ever for the month. ❖

Pool Summary

- A total of 8,126 producers were pooled under the Order with an average daily delivery per producer of 8,907 pounds.
- Pooled milk receipts totaled 2.244 billion pounds, a decrease of 0.7 percent from last month on an average daily basis.
- Class I usage (milk for bottling) accounted for 30.2 percent of total milk receipts, down 0.7 percentage points from September.
- The average butterfat test of producer receipts was 4.08 percent.
- The average true protein test of producer receipts was 3.21 percent.
- The average other solids test of producer receipts was 5.77 percent. ❖

Class Utilization

Pooled Milk	Percent	Pounds
Class I	30.2	677,226,575
Class II	25.1	563,701,034
Class III	29.6	663,052,047
Class IV	15.1	339,781,536
Total Pooled Milk		2,243,761,192

Producer Component Prices

	2022	2021
	\$/lb	
Protein Price	2.4512	3.0130
Butterfat Price	3.6567	1.9414
Other Solids Price	0.2952	0.3560

Class Prices

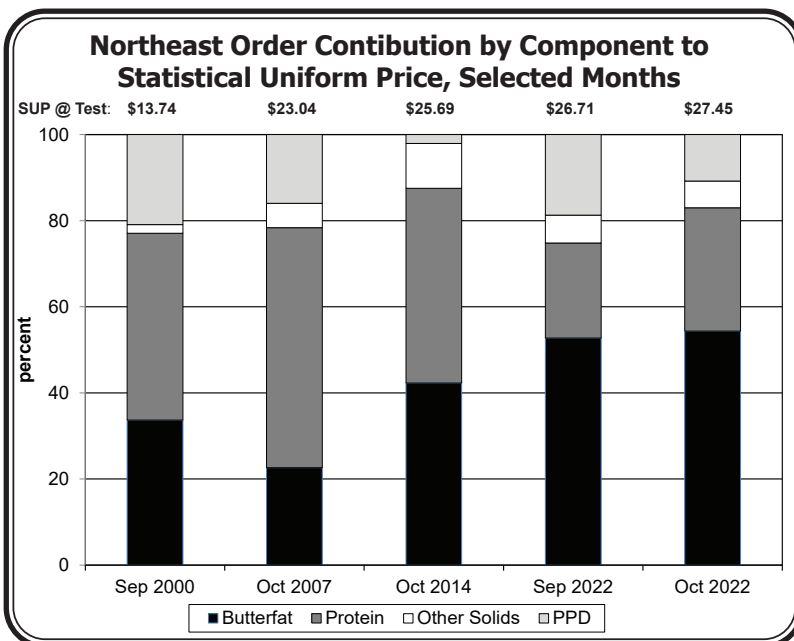
	2022	2021
	\$/cwt	
Class I	25.96	20.33
Class II	25.73	17.08
Class III	21.81	17.83
Class IV	24.96	17.04

What Contributes to Producers' Milk Checks?

A producer's milk check represents their share of the pool. Producers are paid based on their volume of components (butterfat, protein, and other solids) at the Class III price level adjusted for the remainder of the pool (plus or minus) generated by milk used in classes other than Class III. This adjustment is the Producer Price Differential (PPD), and it is further adjusted based on the location of the plant where the producer's milk is delivered. This article will show how components affect the producer price, using the SUP as the simplest example, when component prices vary.

The standardized October Statistical Uniform Price (SUP) equaled \$24.77 per hundredweight (cwt) at Boston. The standardized SUP is reported at 3.5 percent butterfat, 2.99 percent protein, and 5.69 percent other solids. At average tests (the pool overall average for components), the SUP equaled \$27.45 per cwt. Assuming a producer had these same tests, this producer would receive 54.3 percent of their milk check from the amount of butterfat in their milk, 28.7 percent from protein, 6.2 percent from other solids, and 10.8 percent from the PPD (see accompanying table).

For September 2022, the standardized SUP was \$24.82 per cwt, 5 cents higher than the October price. The SUP at test was \$26.71 per cwt, 74 cents lower than the October SUP at test. For September, assuming these tests, butterfat contributed 52.7 percent of the producer milk check, protein accounted for 22.1 percent, other solids equated to 6.5 percent, and the PPD contributed 18.7 percent. Even though the PPD was 69 percent higher in September than October, the overall SUP at average tests was less due



to lower prices for butterfat and protein combined with lower tests of these components.

The accompanying chart compares the contribution of components and the PPD for September and October 2022 to September 2000, October 2007, and October 2014. These other months were chosen because of specific characteristics. September 2000 had a similar PPD to October 2022 (\$2.87 per cwt), but lower butterfat and protein prices and a SUP of \$13.74 at average tests. October 2007 had the second highest protein price for the month of October, and a positive PPD (the highest occurred in October 2020, but the PPD was severely negative), showing how protein accounted for 55.7 percent of the milk check. October 2014 had a SUP of \$24.35 per cwt, the second highest ever for the month of October. It also had relatively high butterfat and protein prices, but it had a PPD of 53 cents per cwt.

The contribution proportions vary each month depending on the component prices and producer's own tests, along with the PPD at the location of where the producer's milk is delivered. ❖

Northeast Order Contributions by Components, September and October 2022

	September 2022				October 2022			
	Test percent	Price per pound	Gross dollars	Contribution percent	Test percent	Price per pound	Gross dollars	Contribution percent
Butterfat	3.95	3.5653	\$14,082.94	52.7	4.08	3.6567	\$14,919.34	54.3
True Protein	3.13	1.8847	\$5,899.11	22.1	3.21	2.4512	\$7,868.35	28.7
Other Solids	5.76	0.2998	\$1,726.85	6.5	5.77	0.2952	\$1,703.30	6.2
PPD		5.00	\$5,000.00	18.7		2.96	\$2,960.00	10.8
Total gross payment			\$26,708.89	100.0			\$27,450.99	100.0
Gross price per cwt			\$26.71				\$27.45	

Butter Price

The USDA Agricultural Marketing Service (AMS) is required every week to collect sales information for cheddar cheese, dry whey, nonfat dry milk (NFD), and butter, and then release this information through the National Dairy Products Sales Report (NDPSR). The commodity prices published in the NDPSR are the foundation of what producers will receive for their milk; the Federal Milk Marketing Orders use this information in their calculations of component prices, class prices, and statistical uniform

prices (SUP). This article will focus on the recent price of butter, and how it may affect prices in the coming months.

Current Butter Market

Throughout the majority of 2022, butter prices significantly increased, with a high of \$3.2445 per pound for the week of October 22, an increase greater than 50 percent in value since the beginning of the year. This series of notable increases began the week of October 23, 2021, (continued on page 3)

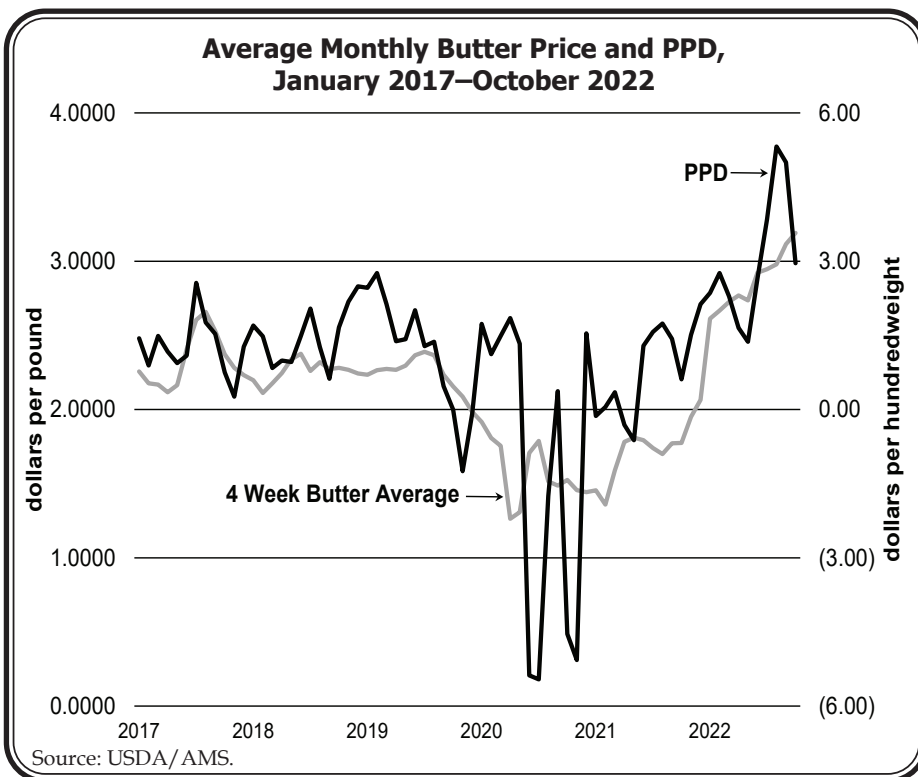
Butter (continued from page 2)

and peaked at the aforementioned October price. Since then, the NDPSR butter price has trended mostly downward, decreasing over 10 percent to \$2.8963 per pound the week of November 12. The sharp decrease in recent weeks comes in contrast to low production, low stocks, cream shortages, labor shortages, and a traditional season of high demand—all of which would be conventionally viewed as putting pressure on the price to move upwards. The National Agricultural Statistics Survey (NASS) report production of butter in 2022 has been the lowest in three years with 1.538 billion pounds in 2022 through September, 33.8 million pounds less than 2021 and 65.4 million pounds less than 2020 for the same time period. NASS, as well, reports cold storage stocks of butter. For the month of September, stocks of butter were at a five year low (267.3 million pounds) in 2022, a 17.6 percent decrease from 2021 and a 22.3 percent decrease from 2020. Both recent lows of butter production and butter stocks come in the shadow of 22-year highs in 2020, 227.2 million pounds of production in April and 414.7 million pounds of stock in June. Cream shortages have partially contributed to these lows. However, Dairy Market News in the November 18 issue report cream is becoming more available, specifically in the Central and West regions of the United States with the Northeast buying retail inventory from these regions.

Although not as dramatic as the recent drops, NDPSR butter price decreases in the months of October and November are not uncommon. Over the last 22 years for the months of October and November, the NDPSR butter price week-to-week change averaged a decrease of 0.2 percent and 109 out of 198 weeks monitored result in a decrease. These historical dips in butter prices also are reflected in the monthly weighted average price of butter (used in calculating the component, class, and SUP prices) between the two months. Some industry analysts believe the recent price drops are a result of a decrease in demand due to buyers having already purchased necessary amounts for the coming holidays.

Butter Price Relationships

The NDPSR butter price is used in deriving the butterfat price; any change in the butter price will have a direct impact on the monthly butterfat price. Subsequently, the class prices are calculated using the butterfat price at 3.5 percent, and any movement in the butter price will move the class prices. All of these prices translate to the SUP, and any shift in the butter price will shift the SUP in the same direction. Using monthly prices from 2008 to 2022



and assuming all other commodity prices stay constant, a 10-cent increase in the monthly weighted average price of butter would, on average, increase the butterfat price \$0.1211 per pound, and on a per hundredweight (cwt) basis: the Class I price \$0.22, Class II price \$0.42, Class III price \$0.04, Class IV \$0.42, SUP \$0.25, and producer price differential (PPD) \$0.21. A 10-cent decrease in the monthly weighted average price of butter would, on average, decrease the prices at the same levels, respectively.

PPD & Butter Price

Due to the calculation of the protein price adjusting for the value of butterfat in cheese compared to butter, the butter price has an inverse relationship with the protein price. A 10-cent increase (assuming all other commodity prices stay constant) in the butter price will, on average, decrease the protein price by \$0.1275 per cwt, using monthly Northeast price calculations from 2008 to 2022. The Class III price uses the protein price in the calculation of the Class III skim price, this causes the Class III price to be the least impacted by a change in the butter price of all the class prices. A change in the butter price is more substantial in the SUP than the Class III price (PPD equals the SUP minus the Class III price); an increase in the butter price will increase the PPD (as displayed in the chart).

SUP & PPD Estimate

Using Chicago Mercantile Exchange (CME) Class III and IV milk futures as settled on November 16, 2022, as a projection for November and December, the SUP is suggested to average \$24.12 per cwt with an average PPD of \$2.67 per cwt.❖

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Computation of Producer Price Differential and Statistical Uniform Price*

	<u>Product Pounds</u>	<u>Price per cwt./lb.</u>	<u>Component Value</u>	<u>Total Value</u>
Class I— Skim	660,795,720	\$13.85	\$91,520,207.22	
Butterfat	16,430,855	3.5996	59,144,505.66	
Less: Location Adjustment to Handlers			(2,991,921.45)	\$147,672,791.43
Class II— Butterfat	32,808,470	3.6637	120,200,391.57	
Nonfat Solids	49,661,884	1.4856	73,777,694.88	193,978,086.45
Class III— Butterfat	29,334,040	3.6567	107,265,784.06	
Protein	21,221,451	2.4512	52,018,020.69	
Other Solids	38,134,303	0.2952	11,257,246.32	170,541,051.07
Class IV— Butterfat	12,914,610	3.6567	47,224,854.39	
Nonfat Solids	30,637,125	1.4000	42,891,975.00	90,116,829.39
Total Classified Value				\$602,308,758.34
Add: Overage—All Classes				216,078.74
Inventory Reclassification—All Classes				(161,371.66)
Other Source Receipts	339,965			12,879.64
Total Pool Value				\$602,376,345.06
Less: Value of Producer Butterfat	91,487,975	3.6567	(334,544,078.18)	
Value of Producer Protein	72,107,367	2.4512	(176,749,578.00)	
Value of Producer Other Solids	129,380,829	0.2952	(38,193,220.68)	(549,486,876.86)
Total PPD Value Before Adjustments				\$52,889,468.20
Add: Location Adjustment to Producers				13,447,811.92
One-half Unobligated Balance—Producer Settlement Fund				1,061,087.14
Less: Producer Settlement Fund—Reserve				(974,448.76)
Total Pool Milk & PPD Value	2,244,051,297			\$66,423,918.50
Producer Price Differential		\$2.96		
Statistical Uniform Price		\$24.77		

* Price at 3.5 percent butterfat, 2.99 percent protein, and 5.69 percent other solids.