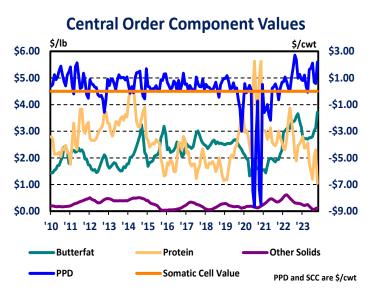




Calculating a "Pay Price"

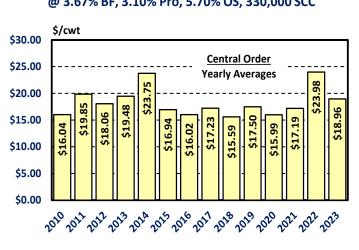
A long time ago, in a Federal Milk
Order system far different from today, the calculation of each dairy farmer's
monthly "pay price" was a relatively straightforward task. In the era prior to the advent of multiple component

pricing, each Federal Milk Order (FMO) announced a single producer pay price known as the Uniform Price. This price, also known as the "Blend" Price, was applicable to all producer milk with only one adjustment - the Butterfat Differential. This adjustment was applicable to each producer's per hundredweight price based upon the butterfat content of milk marketed. In this bygone era, each producer could readily make revenue comparisons by simply examining monthly Uniform Prices (adjusted for variances in butterfat content).



Congressionally-mandated FMO reforms were implemented

on January 1, 2000. Consolidation and reduction of FMOs from 31 to 11 was one major feature of this reform<sup>\*</sup>. The elimination of Uniform Prices adjusted by the Butterfat Differential was another significant change attributable to FMO reform<sup>\*\*</sup>. Four of the post-reform FMOs continued pricing two components - skim and butterfat - and these orders continued to announce a Uniform Price. However, this price was based on a *per hundredweight* Uniform Skim Price and a *per pound* Uniform Butterfat Price, rather than a per hundredweight price adjusted by the Butterfat Differential. The remaining seven orders implemented a multiple component pricing system based on per pound prices for



Effective Value of Producer Milk @ 3.67% BF, 3.10% Pro, 5.70% OS, 330,000 SCC butterfat, protein, and other solids. These seven FMOs also included a Producer Price Differential (PPD) applied on a per hundredweight basis. Four of these orders also incorporated a per hundredweight adjustment based on the somatic cell count of producer milk.

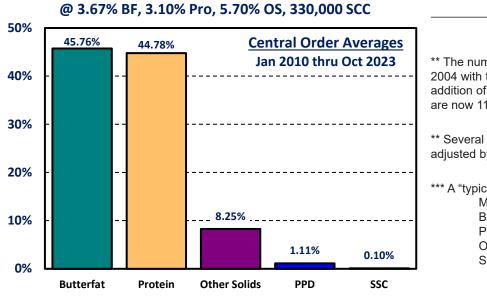
The Central FMO is one of the four post-reform orders that implemented multiple component pricing with a somatic cell adjustment factor. Revenue calculations for Central Order producers must include all priced components to accurately reflect total revenue generated. Failure to include all components can result in erroneous revenue estimations since prices for the various components often run counter to one another, as illustrated by the top graph on page 1. The bottom graph on page 1 depicts effective annual pay prices for a "typical" Central Order producer\*\*\* using all the component prices depicted in the top graph on page 1. What about the PPD ??? The PPD represents, on a per hundredweight basis, total dollars accumulated by the marketwide pool minus the amount paid to producers for priced components. The value of milk used in Class I is usually the largest contributor to the PPD. Although the PPD tends to receive the most attention, it is only one part of a producer's total revenue equation. Over the past 154 months (January 2010 - October 2023), the PPD's proportion of a "typical" Central Order producer's total revenue was slightly more than 1%, as indicated by the bottom graph on this page.

The graphics and table in this bulletin illustrate how the PPD relates to dairy producers' FMO pay price. Examining only one particular milk check component may yield inaccurate impressions. Often when the PPD declines, total revenue increases due to changes in the other priced components. For example, the largest monthly decrease in the PPD was \$7.61 between May and June 2020. The corresponding change in total revenue for our "typical' producer, however, was an increase of over \$3,300. Moreover, July 2020 saw the lowest PPD during this period yet the month to month revenue increased nearly \$5,000. Circumstances such as these make it necessary to understand how each component in a milk check is priced and how these prices relate to one another.



Relationships among the FMO priced components are illustrated by the graphics and tables in this bulletin.

**Central FMO Component Prices:** The top graph on this page details movements in the PPD versus total revenue for our "typical" producer from January 2010 through October 2023. A sample format used in calculating total producer revenue is provided below the graph on page 3. As previously noted, changes in the PPD and total revenue are not highly correlated and often move in opposite directions. The lower graph on this page provides data regarding the proportion of total value represented by each priced component from January 2010 through October 2023. As indicated, protein (44.78%) and butterfat (45.76%) have accounted for approximately 90%



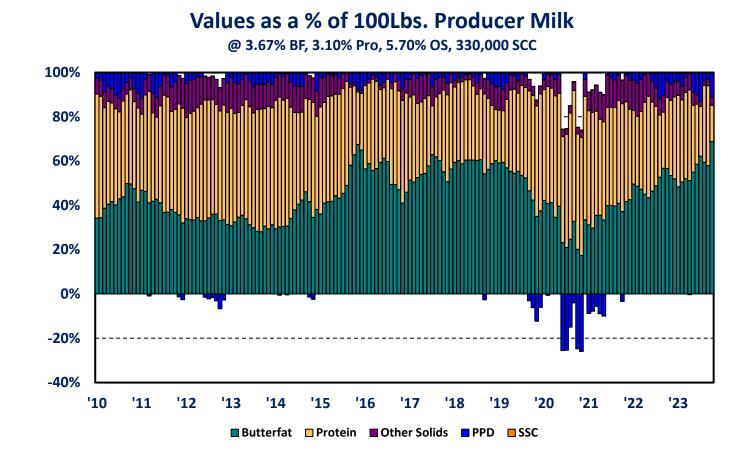
Values as a % of 100 lbs. Producer Milk

of our "typical" Central order producer's total revenue since FMO reform.

\*\* The number of FMO was further reduced to 10 in April 2004 with the termination of the Western Order. With the addition of the California Order in November 2018, there are now 11 FMOs.

\*\* Several FMOs discontinued using Uniform Prices adjusted by the Butterfat Differential prior to FMO reform.

\*\*\* A "typical: producer is defined as follows : Monthly Marketings – 200,000 pounds Butterfat test – 3.67% Protein test – 3.10% Other Solids test – 5.70% Somatic Cell Count – 330,000



## **Calculating Total Revenue and a Pay Price**

Assume a dairy	200,000 pounds of marketings	<u>Octob</u>
producer with:	3.67% Butterfat test	\$3.714
-	3.10% Protein test	\$1.046
	5.70% Other Solids test	\$0.124
	Producer Price Differential (PPD)	\$2.19/
	330,000 Somatic Cell Count	\$0.000

## October '23 Prices: \$3.7144 /lb \$1.0468 /lb \$0.1243 /lb \$2.19 /cwt \$0.00087 /100,000 cells /cwt

<u>Component</u>	Avera <u>Tests</u>	•	Hundred- <u>Weights</u>		Compone Pounds <u>Marketed</u>		October Compone <u>Prices</u>	-	Total <u>Value</u>
Butterfat	3.67	х	2,000	=	7,340	х	\$3.7144	=	\$27,263.70
Protein	3.10	Х	2,000	=	6,200	Х	\$1.0468	=	\$ 6,490.16
Other Solids	5.70	х	2,000	=	11,400	х	\$0.1243	=	\$ 1,417.02
PPD			2,000			х	\$2.19	=	\$ 4,380.00
Somatic Cell Count (Calculate Adjuste		000							
(350-330=20)	20	х	\$0.00087	=	\$0.02	х	2,000	=	\$40.00

## Total Federal Order Value of Milk Marketed:October 2023 ......\$39,590.88Effective Price per Hundredweight ......\$19.80

Note: The Central Order October 2023 Statistical Uniform Price was announced at \$19.03. This price is published at 3.50% Butterfat, 2.99% Protein, and 5.69% Other Solids. Individual producers should be aware their price can vary from the announced Statistical Uniform Price. In the above example the price is \$0.77 above the published price



United States Department of Agriculture

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## **FIRST CLASS**

	Statistical Uniform Price		Producer Price Differential		Class I Utilization	
	<u>Oct '23</u>	<u>Sep '23</u>	<u>Oct '23</u>	<u>Sep '23</u>	<u>Oct '23</u>	<u>Sep '23</u>
Northeast	21.20	20.42	4.36	2.03	30.08	30.03
Appalachian	23.05	21.68			71.69	70.58
Florida	24.99	23.59			81.53	81.52
Southeast	23.64	22.37			77.02	77.94
Upper Midwest	17.28	18.60	0.44	0.21	6.26	5.94
Central	19.03	<b>18.98</b>	2.19	0.59	29.74	27.03
Mideast	19.66	19.38	2.82	0.99	39.58	35.90
California	18.60	19.20	1.76	0.81	20.04	17.19
Pacific Northwest	19.25	19.03	2.41	0.64	22.52	22.54
Southwest	19.52	19.81	2.68	1.42	30.20	26.84
Arizona	20.56	19.71			27.13	29.88

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