

Some Often-Asked Questions About The New Federal Orders

Michael Brown
General Manager,
National All-Jersey Inc.

The new Consolidated Federal Milk Marketing Orders, implemented on January 1 2000, have been the subject of much debate and, in some cases, controversy over the past year.

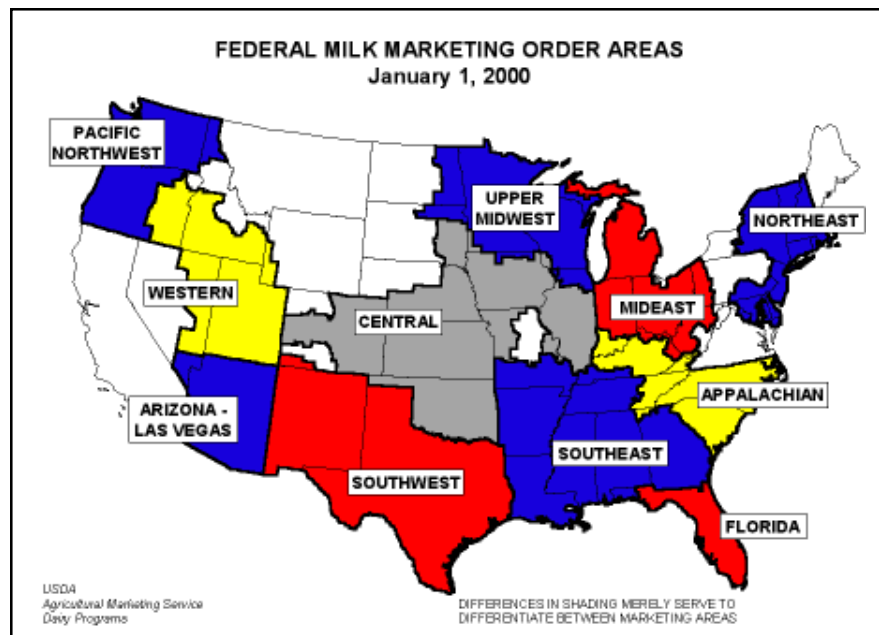
Debates on Dairy Compacts and Class I price levels were particularly heated. At the end of its 1999 session, Congress extended the New England Compact and mandated Class I price differentials that were very close to the old Federal Order levels in the final days of the fall congressional session. These changes were included when Federal Order reform took place on January 1, 2000, less than a month after the debates had ended and the lawsuits had been dropped.

The short period of time between these final modifications and the implementation of the New Federal Order pricing system left very little time for producers to learn more about the pricing changes. In fact, most milk buyers spent a good portion of January learning the details of the new pricing system, which were finalized just before Christmas. Since that time, National All-Jersey has been working with producers and processors across the country to develop milk premium programs that complement the reform pricing programs. This article will answer some of the more common questions on the reform pricing, and how it affects Jersey producers in different markets.

Why was the old pricing system replaced?

In the past, the base price for Federal Order milk was the Basic Formula Price, or BFP. Calculating the BFP was a two-step process. First, buyers of Grade B milk in Wisconsin and Minnesota were surveyed to determine the average price they paid for milk during the previous month. This price was then updated to the current month, based on the change in dairy product prices from the previous to current month.

Although many producer groups liked the idea of using a price survey, this system had several serious problems. First, the amount of Grade B milk eligible for the survey has been rapidly declining over



time, limiting the statistical accuracy of the survey. Second, using the dairy product prices to update the Grade B survey price resulted in a BFP that double-counted both increases and declines in the market. This resulted in a BFP that was often much too high or too low during periods of market fluctuation, and did not accurately reflect current market conditions.

How are the new component-based prices better?

Most agree that the new component prices solve several significant problems with the old system. First, because the new component prices are directly based on product prices, they are predictable and transparent. Both producers and processors can calculate their milk component prices from the publicly announced product price reports. Second, the double-counting of product price increases and declines that plagued the volatile BFP over the past few years is eliminated. Third, different milk components determine the yields in different products. For example, milk fat and protein content directly determine cheese yield, while solids-not-fat is the component that best determines the yields for nonfat dry milk or nonfat yogurt.

For the most part, the change to a component-based pricing system has been widely accepted. The industry recognizes that the new price formulas better reflect

the value of milk and the milk components used to manufacture the different manufactured products. Most processors have discovered that the raw milk and milk components that they purchase under the new Federal Order pricing are valued more closely in line with the products they make than they were in the past.

What are the milk components used to price producer milk?

The three component used to price Class III milk are the same ones used for producers' milk: butterfat, true protein, and other solids. While butterfat measurement has not changed, both true protein and other solids are different measures than used before in federal orders.

What is true protein?

USDA adopted *true protein* as the protein measure used under Federal Order reform. Before January 1, 2000, almost all of the U.S. dairy industry used *total, or crude, protein* for pricing milk. The primary exception was New York State, where most protein premiums have been based on true protein for more than a decade.

USDA had several logical reasons for adopting true protein over crude protein, the traditional measure. First, true protein is a better measure of the actual protein in milk, because it does not include the non-protein nitrogen (NPN) that is included as

MILK MARKETING

part of crude protein. Since NPN plays no role in product yields, it is of no economic value to processors.

Second, true protein is already being measured by modern infrared laboratory equipment. In fact, the infrared testing machines used to measuring crude protein actually measure true protein, then adjust *up* for the NPN factor. Because true protein better measures useable milk protein, and modern lab equipment already measures true protein, the movement to true protein is a logical one by USDA, and widely supported by the dairy industry.

Research shows that the relationship between true protein and crude protein is usually an additive one, although individual herds and cows vary. Cornell University researchers have found that milk generally contains about 0.19 pounds non-protein nitrogen per hundredweight (cwt.). A Federal Order market study from Texas found the relationship to be very consistent at 0.18 lbs. per cwt., regardless of season or herd protein test levels. In summary, the research shows that true protein concentration is usually 0.18 to 0.20 pounds per cwt. lower than crude protein.

The simple way to make this adjustment is shown below. The adjustment is based on the Cornell estimate of 0.19 lbs. non-protein nitrogen per cwt.

$$\text{True Protein} = \text{Crude Protein} - 0.19$$

An example with 3.8% crude protein:

$$\begin{aligned} \text{True Protein} &= 3.8 - 0.19 \\ &= 3.61\% \end{aligned}$$

What is "other solids"?

Other solids represents all of the non-water ingredients in milk other than butterfat or true protein. It consists primarily of lactose, ash (minerals) and non-protein

nitrogen components of milk. Other solids is calculated by subtracting true protein from milk solids not fat (SNF).

$$\begin{aligned} \text{Other Solids} &= \\ \text{Milk Solids Not Fat} &- \text{True Protein} \end{aligned}$$

An example with 9.3% SNF and 3.61% True Protein:

$$\begin{aligned} \text{Other Solids} &= 9.3\% - 3.61\% \\ &= 5.69\% \end{aligned}$$

How are the new component-based prices calculated?

As stated above, the new component prices are directly related to the relationship between the component and product yield and price. Each of these components is valued, based on its yield relationship to a different dairy product. USDA's National Agricultural Statistics Service (NASS) collects the prices used for these calculations. The price survey results from the previous week are reported every Friday morning.

The formulas used to determine producer component values are shown below.

Butterfat values are based on the value of milk fat in butter:

$$\text{Class III/Producer Butterfat Price} = (\text{NASS Butter Price} - \$0.114) \div 0.82$$

The true protein price is based on the value of protein in cheese, plus the added value of fat in cheese:

$$\begin{aligned} \text{Class III/Producer Protein Price} &= \\ &[(\text{NASS Cheese price} - 0.1702) \times 1.405] + \\ &\{[\text{Cheese price} - 0.1702] \times 1.582\} - \\ &\text{Butterfat Price} \times 1.28\} \end{aligned}$$

The other solids price is based on the Class III/Producer Other Solids Price:

$$\text{Class III/Producer Other Solids Price} = (\text{NASS Dry whey price} - 0.137) \div 0.968$$

How did USDA adjust the protein price to reflect the change from crude to true protein?

The yield relationship between protein and cheese was increased from 1.32 to 1.405 to reflect the change to true protein. USDA also changed the multiplier in the protein formula dealing with the added value of fat in cheese from 1.20 to 1.28.

Are the new component-based prices lower?

Both old and new Federal Order prices are available for the period from August, 1998 through December, 1999. Based on this period of time, the new component-based prices are not lower than the old system prices. Figure 1 (*bottom left*) compares the average producer Class III milk prices under the new MCP and several of the old federal order pricing programs. The producer component value under the new MCP is from 15¢ to \$1.02 higher than under the old Federal Order programs.

How will the new system affect Class I Prices?

Class I prices will generally be higher under the new federal order program in both MCP and fat-skim markets. There are two reasons for this. First, the fluid milk differentials signed into law are higher on average than the previous Class I differentials. In fact, they are higher in almost all markets across the country. Second, USDA adopted a new base price for Class I, called the Class I Price Mover.

The Class I mover is the higher of either (a) the value of milk in cheese or (b) the value of milk in butter and nonfat dry milk, based on product prices during the first two weeks of the previous month. For example, the Class I price mover for March, 2000 is \$10.84, which was the

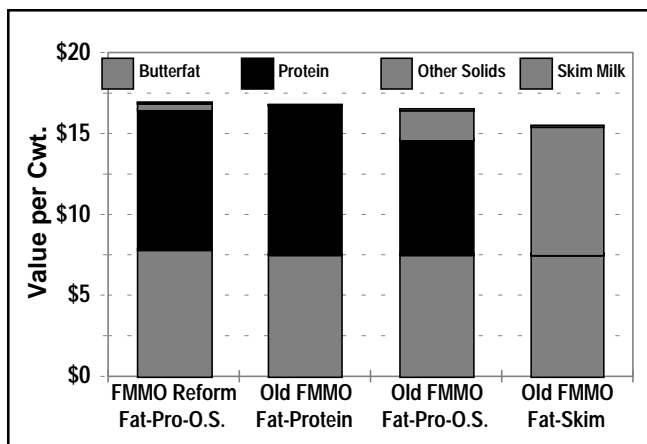


Figure 1. Federal Order Jersey component values, August 1998 to December 1999 averages.

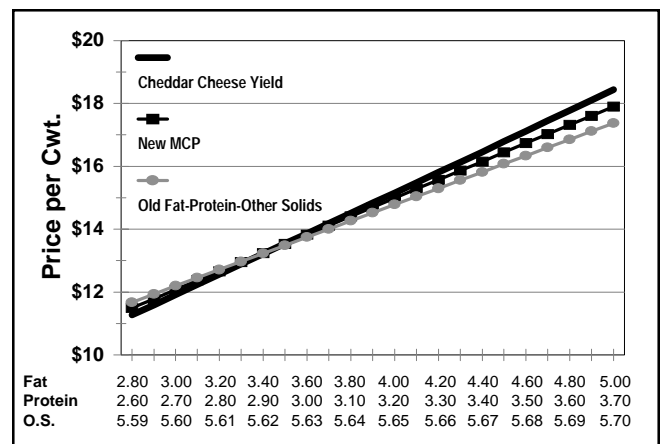


Figure 2. Milk price comparisons at different component levels, August 1998 to December 1999.

value of milk used for butter/NFDM prices during the first two weeks of February, 1999. This price was \$1.28 higher than the value of milk used for cheese, which was \$10.56. Based on average Federal Class I utilization of 40%, the new option of using the higher of the two prices as the Class I mover will put an additional 51¢ per cwt. in producer pockets.

If Federal Order reforms had been in place last year, the Class I price mover based on these two markets (cheese and butter/nonfat dry milk) would have been over 80¢ higher than it would have been based on the cheese market alone. During January, the first month of federal order pricing, this Class I mover was nearly 70¢ higher than it would have been if the Class III (cheese milk) price had remained the base, and also over \$1.00 higher than it would have been under the old system. On average, the use of this Class I price mover translated into a 29¢ net gain in the value of a producer's January milk.

How is the old "blend price" reflected under the new MCP system?

Before January 1, 2000, Federal Orders that did not have multiple component pricing paid producers based on an average, or blend, price for all milk used in a market standardized to a 3.5% butterfat test. In orders with MCP, producers were paid on component values as well as a per-cwt. price that reflected the difference between the average or blend price, and the Class III milk price. This difference is called the *producer price differential*, or *weighted average differential*.

Expansive Website On Dairy Programs Available

The Dairy Programs section of the website maintained by the Agricultural Marketing Service of USDA provides a wealth of information on Milk Marketing Order reform pricing, dairy marketing in general, plus other statistics such as regional milk production costs.

Visit the site at www.ams.usda.gov/dairy.

In simplest terms, the producer price differential can be defined as follows:

Producer Price Differential per cwt. =
Average Market Milk Price - Class III Milk Price

The seven new Federal Orders with MCP will continue to use the producer price differential, or PPD, to reflect the difference in the value of all milk in a marketing order and the Class III price.

What changes in pricing will we see in the four new fat-skim markets?

The 3.5% blend price and the butterfat differential have disappeared! The biggest change in fat-skim markets is the loss of the old blend price at a 3.5% butterfat test. Instead, producer milk will be priced based on three variables:

- Hundredweights of skim milk;
- Pounds of butterfat; and
- Hundredweights of milk x location adjustment.

How does the new component pricing

compare to cheese yield?

The new Federal Order MCP program uses butter, cheese and whey-based yield formulas to determine producer component values. These yield-base prices result in component values that track very favorably to cheese yield. Figure 2 compares the new Federal Order producer component values with cheese yield at different milk component test levels. The differences in Federal Order milk value and cheese yield are relatively small.

If the prices are so close to cheese yield, are there still opportunities to garner market premiums on high solids milk?

Yes. National All-Jersey has been working with processors across the country over the past few months looking for the best ways to encourage high-solids milk production within the new Federal Milk Marketing Order system. Manufacturers of products as diverse as cheese and ice cream are developing component-based incentive programs to ensure they keep their supplies of high-solids milk.

What changes may be ahead for Federal Orders?

Congress is requiring USDA to consider changes to the Class III and Class IV milk prices that are included in the Federal Order program. Proposals for change were due to USDA by February 29, and a hearing on these changes will likely take place in early spring. While it is too early to know for sure, no major structural changes are likely in the overall pricing system. Milk component values based on product yields and prices will remain the cornerstone of the new Federal Milk Marketing Orders.