

Class 1 Price Formula for Fluid Milk Products

Determining the price for fluid milk products involves several steps. The Class 1 fat price for the fluid milk pricing formula is set directly and uses the Chicago Mercantile Exchange (CME) butter price with an adjustment. The SNF and fluid carrier prices are calculated as residuals. They rely on a basic price mover called the commodity reference price (CRP) which is based off the higher of the CME price for Cheddar cheese and the Dairy Market News price for Mostly Western Dry Whey, or the CME Grade AA butter price and California weighted average price for nonfat dry milk. The value of the Class 1 fat price is subtracted from the CRP and the remaining residual value is allocated to SNF and fluid carrier. Once the component prices have been assigned to fat, SNF, and fluid carrier portions of milk, these component prices are converted to a standardized milk price.

Inherent differences between the California Class 1 pricing formula and the Federal Order Class I pricing formula result in differences in prices:

- Because the CME commodity prices used in California respond quicker to market changes than the NASS survey prices used in federal orders, Federal Order Class I prices tend to lag California Class 1 prices.
- Each formula includes prices not included in the other formula: only federal orders use barrel cheese prices and only California uses whey butter prices.

CURRENT FORMULA

California Class 1 Formula (Southern California)

$$\text{Price of Class 1 Fat} = (\text{CME Butter} - \$0.118) \times 1.2$$

Butter Adjuster
Yield: 1.2 lbs. butter from 1 lb. of fat

Commodity Reference Price (CRP) = the higher of the two price calculations:

$$\begin{aligned} & (\text{CME Cheddar}) \times 9.8 + (\text{CME Butter} - \$0.10) \times 0.27 \\ & \text{OR} \\ & (\text{Dry Whey Price} \times 5.8) - \$0.85 \\ & + (\text{CME Butter} \times 1.2) \times 3.5 + (\text{CA NFDM} \times 0.99) \times 8.7 \end{aligned}$$

Yield: 9.8 lbs. cheese from 100 lbs. of milk
Added Whey Butter Value
Yield: 0.27 lbs. whey butter from 100 lbs. of milk
Western Dry Whey (mostly) prices
Yield: 5.8 lbs. dry whey from 100 lbs. of milk
Dry Whey Adjuster
Yield: 1.2 lbs. butter from 1 lb. of fat
Fat content of whole milk
Yield: 0.99 lbs. NFDM from 1 lb. of SNF
SNF content of whole milk

$$\begin{aligned} \text{Class 1 SNF} &= (((\text{CRP} + \$0.147) - (\text{Class 1 fat price} \times 3.5)) \times 0.76) / 8.7 \\ \text{Class 1 Fluid} &= (((\text{CRP} + \$0.147) - (\text{Class 1 fat price} \times 3.5)) \times 0.24) / 87.8 \end{aligned}$$

Fixed Differential
% Fat in Raw Milk
Proportion of Residual Value Assigned to SNF
% SNF in Raw Milk
% Fat in Raw Milk
Proportion of Residual Value Assigned to Fluid
% Fluid in Raw Milk

PROPOSED FORMULAS

ALLIANCE OF WESTERN MILK PRODUCERS, WESTERN UNITED DAIRYMEN, AND CALIFORNIA DAIRY WOMEN ASSOCIATION

Proposed Changes Effective January 1, 2009 through June 30, 2009

$$\text{Class 1, 2, and 3 Fat} = \text{Current Formula Fat Price Calculation} + \$0.04$$

$$\text{Class 1, 2, and 3 SNF} = \text{Current Formula SNF Price Calculation} + \$0.10$$

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Class 1 Pricing Formula Proposed Changes:

$$\text{Class 1 Fat} = ((\text{CME Butter} - \$0.1315) \times 1.2)$$

$$\text{Class 1 SNF} = (((\text{CRP} - \$1.203) - (\text{Class 1 Fat Price} \times 3.5)) \times 0.76) / 8.7$$

$$\text{Class 1 Fluid} = (((\text{CRP} - \$1.203) - (\text{Class 1 Fat Price} \times 3.5)) \times 0.24) / 87.8$$

(For Northern California, subtract \$0.0031 from the per pound price of fluid carrier.)
(Same change for Northern and Southern California formulas)

Class 2 and 3 Pricing Formulas Proposed Changes:

$$\text{Class 2 fat price} = \text{Average Class 4a fat price} + \text{Differential}$$

~~\$0.0370 Northern California~~
~~\$0.0393 Southern California~~

$$\text{Class 3 fat price} = \text{Average Class 4a fat price} + \text{Differential}$$

~~\$0.0370 Northern California~~
~~\$0.0393 Southern California~~

$$\text{Class 2 SNF price} = \text{Average Class 4a SNF price} + \text{Differential}$$

\$0.0643
\$0.0490 Northern California
\$0.0748 Southern California
~~\$0.0901~~

$$\text{Class 3 SNF price} = \text{Average Class 4a SNF price} + \text{Differential}$$

~~\$0.0586~~
(\$0.0433 per pound throughout California)

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$$\text{Class 1 Fluid} = (((\text{CRP} + \$0.0147) - (\text{Class 1 Fat Price} \times 3.5)) \times 0.24 + \text{Factor}^*) / 87.8$$

(For Northern California, subtract \$0.0031 from the per pound price of fluid carrier.)

***Factor = $\frac{0.26 \times \text{Previous total monthly cost to the Pool of transportation allowances and credits}}{\text{Number of hundredweights of raw milk processed by Class 1 plants in such month}}$**