

Attachment A. Formulas for Advanced Prices and Pricing Factors

These formulas are defined in 7 CFR 1000.50, revised as of January 1, 2015.

Terms and Definitions: Announced milk prices are per 100 pounds or cwt, rounded to the nearest cent. Component prices are per pound, rounded to nearest one-hundredth cent. Announced product prices and pricing factors are per pound, rounded to the nearest one-hundredth cent. The diesel fuel price is per gallon, rounded to the nearest one-tenth cent. The mileage rate factor is per hundredweight per mile, rounded to the nearest one-thousandth cent.

The National Dairy Products Sales Report provides current wholesale market prices for basic dairy commodities. These commodity prices for the previous two weeks are used in the following formulas to calculate the USDA's Advanced Prices and Pricing Factors used in the Federal milk marketing order program.

For the product price averages below, j corresponds to the number of previous weeks. For example, where j=1, this corresponds to the week ending the Saturday prior to the date of the Announcement; where j=2, this corresponds to the week ending the Saturday before that. The summation sign (\sum) indicates that terms are added corresponding to the previous 2 weeks.

- Butter Price =
$$\frac{\sum_{j=1}^2((\text{Weekly Butter Price})_j \times (\text{Weekly Butter Sales})_j)}{\sum_{j=1}^2(\text{Weekly Butter Sales})_j}$$
- Nonfat Dry Milk (NFDM) Price =
$$\frac{\sum_{j=1}^2((\text{Weekly NFDM Price})_j \times (\text{Weekly NFDM Sales})_j)}{\sum_{j=1}^2(\text{Weekly NFDM Sales})_j}$$
- Cheese Price =
$$\frac{\sum_{j=1}^2(((\text{Barrel Price} + 0.03)_j \times (\text{Barrel Sales})_j) + ((\text{Block Price})_j \times (\text{Block Sales})_j))}{\sum_{j=1}^2((\text{Barrel Sales})_j + (\text{Block Sales})_j)}$$
- Dry Whey Price =
$$\frac{\sum_{j=1}^2((\text{Weekly Dry Whey Price})_j \times (\text{Weekly Dry Whey Sales})_j)}{\sum_{j=1}^2(\text{Weekly Dry Whey Sales})_j}$$
- Base Class I Price = (Base Skim Milk Price for Class I x 0.965) + (Advanced Butterfat Pricing Factor x 3.5)
- Base Skim Milk Price for Class I = Higher of Advanced Class III or IV Skim Milk Pricing Factors
- Advanced Class III Skim Milk Pricing Factor = (Protein Price x 3.1) + (Other Solids Price x 5.9)
 - Protein Price = ((Cheese Price - 0.2003) x 1.383) + (((Cheese Price - 0.2003) x 1.572) - Advanced Butterfat Pricing Factor x 0.9) x 1.17)
 - Other Solids Price = (Dry Whey Price - 0.1991) x 1.03
- Advanced Class IV Skim Milk Pricing Factor = Nonfat Solids Price x 9
 - Nonfat Solids Price = (Nonfat Dry Milk Price - 0.1678) X 0.99
- Advanced Butterfat Pricing Factor = (Butter Price - 0.1715) x 1.211
- Class II Skim Milk Price = Advanced Class IV Skim Milk Pricing Factor + 0.70
- Class II Nonfat Solids Price = Class II Skim Milk Price / 9

**Additional Notes: All product prices are weighted by sales volume. Commodity prices used for Federal order formulas for Advanced Prices are weighted averages for the previous two weeks. To obtain the weighted two-week product price average, multiply each week's respective sales volume in pounds by the weekly product price in pounds; the resulting total weekly sales dollars are combined and then divided by the total sales volume for the two weeks to calculate the weighted product price average rounded to the nearest one-hundredth cent. The weekly Cheddar cheese barrel price, adjusted to 38 percent moisture content, plus three cents per pound and the 40 pound block price and their respective sales volume are used to calculate the weighted average cheese price. The Class I Base Price is shown for informational purposes only; it is not defined in Section 1000.50 of the order. The Class I skim milk price equals the Base Skim Milk Price plus the applicable Class I differential. The Class I Butterfat Price equals Advanced Butterfat Pricing Factor plus the (applicable Class I differential divided by 100).*

Formulas for Monthly Class and Component Prices

These formulas are defined in 7 CFR 1000.50, revised as of January 1, 2015.

Terms and Definitions: Announced milk prices are per 100 pounds or cwt, rounded to the nearest cent. Component prices are per pound, rounded to nearest one-hundredth cent. Announced product prices and pricing factors are per pound, rounded to the nearest one-hundredth cent. The somatic cell adjustment rate is for every 1,000 cells, rounded to the nearest one thousandth cent.

The National Dairy Products Sales Report provides current wholesale market prices for basic dairy commodities. These commodity prices are used in the following formulas to calculate the USDA's Class and Component Prices used in the Federal milk marketing order program.

For the product price averages below, j corresponds to the number of previous weeks. For example, where j=1, this corresponds to the week ending the Saturday prior to the date of the Announcement; where j=2, this corresponds to the week ending the Saturday before that; etc. The summation sign (\sum) indicates that terms are added corresponding to the previous 4 or 5 weeks, where the number of weeks equals the number of National Dairy Products Sales Reports that have occurred since the last monthly Announcement of Class and Component Prices was issued.

- Butter Price =
$$\frac{\sum_{j=1}^{4 \text{ or } 5} ((\text{Weekly Butter Price})_j \times (\text{Weekly Butter Sales})_j)}{\sum_{j=1}^{4 \text{ or } 5} (\text{Weekly Butter Sales})_j}$$
- Nonfat Dry Milk (NFDM) Price =
$$\frac{\sum_{j=1}^{4 \text{ or } 5} ((\text{Weekly NFDM Price})_j \times (\text{Weekly NFDM Sales})_j)}{\sum_{j=1}^{4 \text{ or } 5} (\text{Weekly NFDM Sales})_j}$$
- Cheese Price =
$$\frac{\sum_{j=1}^{4 \text{ or } 5} (((\text{Barrel Price} + 0.03)_j \times (\text{Barrel Sales})_j) + ((\text{Block Price})_j \times (\text{Block Sales})_j))}{\sum_{j=1}^{4 \text{ or } 5} ((\text{Barrel Sales})_j + (\text{Block Sales})_j)}$$
- Dry Whey Price =
$$\frac{\sum_{j=1}^{4 \text{ or } 5} ((\text{Weekly Dry Whey Price})_j \times (\text{Weekly Dry Whey Sales})_j)}{\sum_{j=1}^{4 \text{ or } 5} (\text{Weekly Dry Whey Sales})_j}$$
- Butterfat Price = (Butter Price – 0.1715) x 1.211
- Nonfat Solids Price = (NFDM Price – 0.1678) x 0.99
- Protein Price = ((Cheese Price – 0.2003) x 1.383) + (((((Cheese Price – 0.2003) x 1.572) – Butterfat Price x 0.9) x 1.17)
- Other Solids Price = (Dry Whey Price – 0.1991) x 1.03
- Somatic Cell Adjustment Rate = Cheese Price x 0.0005
- Class II Price = (Class II Skim Milk Price x 0.965) + (Class II Butterfat Price x 3.5)
 - Class II Skim Milk Price = See the Announcement of Advanced Prices and Pricing Factors for the applicable month.
 - Class II Butterfat Price = Butterfat Price + 0.007
- Class III Price = (Class III Skim Milk Price x 0.965) + (Butterfat Price x 3.5)
 - Class III Skim Milk Price = (Protein Price x 3.1) + (Other Solids Price x 5.9)
- Class IV Price = (Class IV Skim Milk Price x 0.965) + (Butterfat Price x 3.5)
 - Class IV Skim Milk Price = Nonfat Solids Price x 9

**Additional Notes: All product prices are weighted by sales volume. Commodity prices used for Federal order formulas for Class Prices are weighted averages for the previous four or five weeks. To obtain the weighted four- or five-week product price average, multiply each week's respective sales volume in pounds by the weekly product price in pounds; the resulting total weekly sales dollars are combined and then divided by the total sales volume for the four or five weeks to calculate the weighted product price average rounded to the nearest one-hundredth cent. The weekly Cheddar cheese barrel price, adjusted to 38 percent moisture content, plus three cents per pound and the 40 pound block price and their respective sales volume are used to calculate the weighted average cheese price. Producer component prices are only applicable to orders 1, 30, 32, 33, 124, and 126. The Somatic Cell Adjustment Rate is only applicable to orders 30, 32, 33, and 126.*