

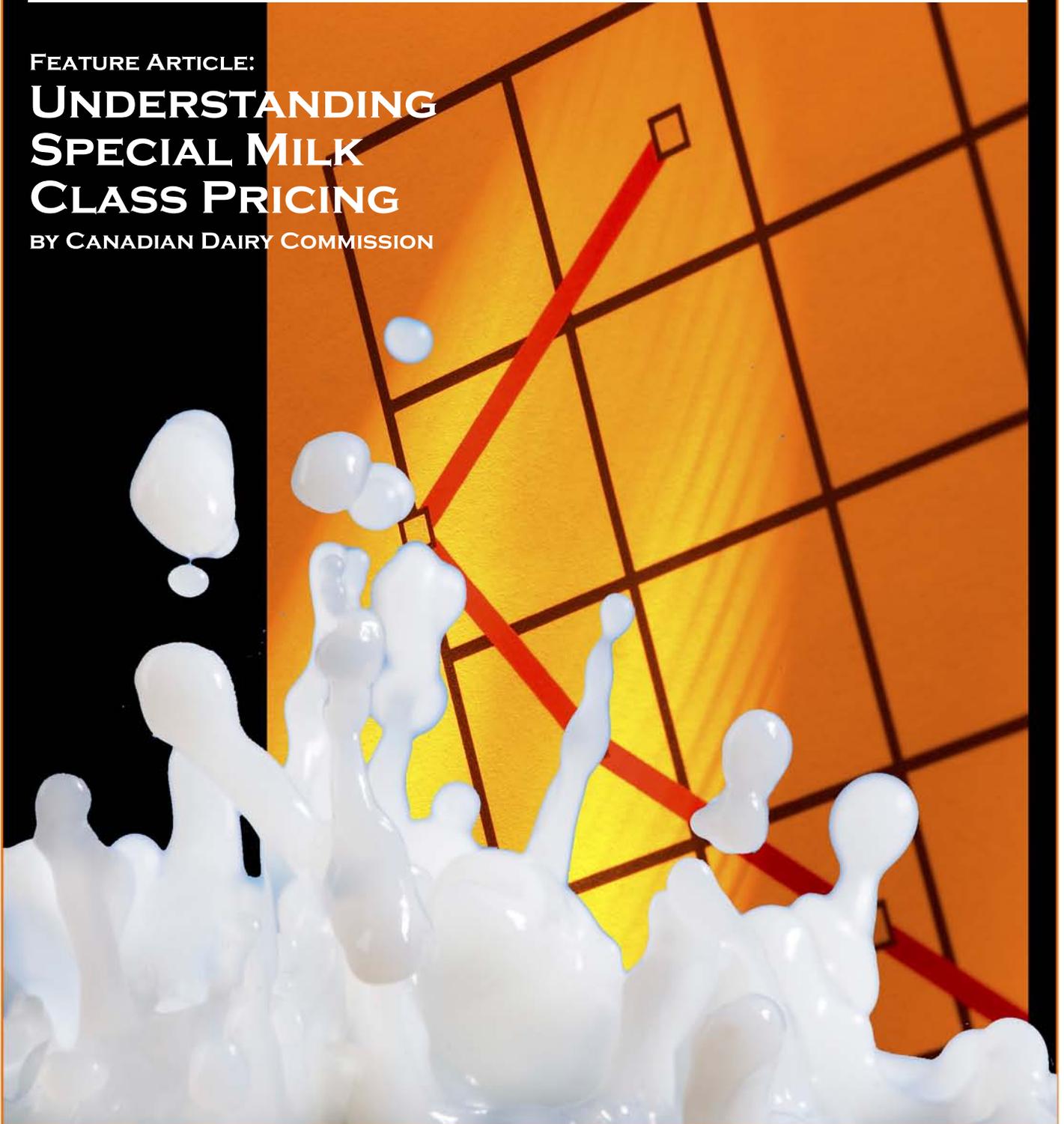
Sept 2010

# The Experts' FORUM

FEATURE ARTICLE:

## UNDERSTANDING SPECIAL MILK CLASS PRICING

BY CANADIAN DAIRY COMMISSION





**UNDERSTANDING SPECIAL MILK CLASS PRICING:  
PRACTICAL INFORMATION FOR SPECIAL CLASS PERMIT HOLDERS**

Special Milk Class Permit Holders interested in knowing more about Special Class milk component prices and how they are derived can use this document as a reference guide.

**SPECIAL MILK CLASS COMPONENT PRICES 5(A), (B) AND (C)**

**Effect of Special Milk Class component prices on dairy ingredient pricing:**

On or before the 15<sup>th</sup> day of each month, the CDC announces the Special Milk Class Permit Program (SMCPP) milk component prices for butterfat, protein, and other solids for the following month. These component prices appear in an online publication entitled: *Ingredients Mag Express*.

**EXAMPLE OF SPECIAL MILK CLASS COMPONENT PRICES ANNOUNCEMENT**

<b>Milk Class</b>	<b>Butterfat (\$/Kg)</b>	<b>Protein (\$/Kg)</b>	<b>Other Solids (\$/Kg)</b>
<b>5(a)</b>	3.3120	6.0654	0.4616
*	-7.7%	-4.0%	11.4%
<b>5(b)</b>	3.3120	2.3332	2.3332
*	-7.7%	-9.3%	-9.3%
<b>5(c)</b>	3.7886	2.0138	2.0138
*	-5.2%	-7.1%	-7.1%

\*Change (%) from previous month

**DEFINITIONS OF SPECIAL MILK CLASS CATEGORIES:**

- 5(a): Cheese used as an ingredient in further processing
- 5(b): All other dairy products/ingredients used in further processing
- 5(c): Dairy products/ingredients used in confectionery products

Canadian dairy processors use these Special Milk Class Component Prices each month to purchase the raw milk components used to manufacture the dairy ingredients that are sold to Special Milk Class Permit Holders.

## **Special Milk Class Priced Ingredients**

A number of factors are taken into account by dairy processors and distributors in setting the ultimate selling price of dairy ingredients to a Special Class Permit Holder. They include but are not limited to the following:

- Processing of the raw milk into dairy ingredients (includes labour, energy and other related costs).
- Quantity of dairy ingredients purchased/ordered by a SMCPP permit holder (full truck load vs. less-than truck load)
- Product mix variety
- Delivery requirements (delivery to multiple plants)
- Product specifications (6-months aged, shredded, Organic certified, etc.)
- Any special requirements
- Financing terms

Ultimately, it is the responsibility of the Special Class Permit Holder to consider a competitive bid process, select a dairy processor and/or Distributor and negotiate the purchase price of its Special Class priced dairy ingredients.

## **RELATION TO U.S. PRICES**

### **SMCPP monthly price calculation:**

Special Milk Class component prices for Classes 5(a) and 5(b) are calculated each month based on U.S. milk and dairy component prices (for Classes III and IV) announced by the United States Department of Agriculture (USDA).

**60 day lag:** Special Milk Class component prices are announced by the CDC on or before the 15<sup>th</sup> day of each month for the following month and are based on U.S. milk and dairy component prices announcements for the previous month which translates into a two month lag in time between the USDA pricing and the effective date of the CDC's Special Class component prices. U.S. dairy component prices announcements are available online on USDA's website (select Announcement Type: *Class II, III, IV and Components* and Data Series: *Announcement: [Milk Price Announcements, Summaries, and Product Prices](#)*).

The following examples (next 2 pages) serve to demonstrate how Special Milk Class component prices for Classes 5(a) and 5(b) were calculated for the month of February 2010, based on U.S. milk components prices announced for December 2009 (60 day lag effect).

**Class 5(a) calculation:** To establish milk component prices in Class 5(a), the CDC uses the U.S. component price for butterfat, protein and other solids (see ❶ on next page) and converts them from US to CAN dollars and pounds to kilos (a slight adjustment is made to the protein value to recognize a CDN standard<sup>3</sup>).

**U.S. CLASS III COMPONENTS<sup>1</sup>**  
**DECEMBER 2009**

**SPECIAL MILK CLASS PRICING 5(A)**  
**FEBRUARY 2010**  
(ANNOUNCED ON OR BEFORE JANUARY 15, 2010)

Announcement of Class and Component Prices for December 2009 1/  
Release date: December 31, 2009

Butterfat: \$3.5874 / Kg  
Protein<sup>3</sup>: \$6.3157 / Kg  
Other solids<sup>3</sup>: \$0.4142 / Kg

**1**  
Component prices  
for Class 5(a)  
calculation

Class II Price: 2/	14.25	(per hundredweight)
Class II Butterfat Price:	1.5503	(per pound)
Class III Price:	14.98	(per hundredweight)
Class III Skim Milk Price:	9.93	(per hundredweight)
Class IV Price:	15.01	(per hundredweight)
Class IV Skim Milk Price:	9.96	(per hundredweight)
Butterfat Price:	1.5433	(per pound)
Nonfat Solids Price:	1.1068	(per pound)
Protein Price:	2.8751	(per pound)
Other Solids Price:	0.1727	(per pound)
Somatic Cell Adjustment Rate:	0.00080	(per 1,000 somatic cell count)
Product Price Averages:		
Butter	1.4459	(per pound)
Nonfat Dry Milk	1.2858	(per pound)
Cheese	1.5969	(per pound)
Dry Whey	0.3668	(per pound)

**CONVERSION**

LBS → KILOS: 2.2046  
AVERAGE EXCHANGE RATE (US → CAN)<sup>2</sup> DECEMBER 2009: \$1.0544

<sup>1</sup> Source: U.S. prices announcements are available online on USDA website (select Announcement Type: Class II, III, IV and Components and Data Series: Announcement: [Milk Price Announcements, Summaries, and Product Prices](#)).

<sup>2</sup> The CDC uses the monthly average noon rate from Bank of Canada to convert U.S. component prices to CAN dollars. Monthly average exchange rates are available on [Bank of Canada Website](#); select the month of the U.S. component prices to convert (range of dates from the first to the last day of the month), select the currency: U.S. dollar (noon), click on Get Rates and look at the average for the month in CAN dollars.

<sup>3</sup> An adjustment is required to convert the US "true" protein to the crude protein composition used in Canada.  
Protein price adjustment: Canadian protein value represents 94.5% of the U.S. protein value.  
Other solids price adjustment: The other solids component must be increased by 3.18%.

**Class 5(b) calculation:** The CDC uses the U.S. component price for butterfat to establish a butterfat price for Class 5(b) and uses the nonfat solids U.S. component price (see 2 on next page) to establish a protein and other solids component price in Class 5(b). The CDC converts the U.S. component prices to CAN dollars and the pounds to kilos.

**U.S. CLASS IV COMPONENTS<sup>1</sup>**  
**DECEMBER 2009**

**SPECIAL MILK CLASS PRICING 5(B)**  
**FEBRUARY 2010**  
*(ANNOUNCED ON OR BEFORE JANUARY 15, 2010)*

Announcement of Class and Component Prices for December 2009 1/  
Release date: December 31, 2009

Butterfat: \$3.5874 / Kg  
Protein: \$2.5728 / Kg  
Other solids: \$2.5728 / Kg

2  
Component prices  
for Class 5(b)  
calculation

3  
NASS dairy product  
price averages

Class II Price: 2/	14.25	(per hundredweight)
Class II Butterfat Price:	1.5503	(per pound)
Class III Price:	14.98	(per hundredweight)
Class III Skim Milk Price:	9.93	(per hundredweight)
Class IV Price:	15.01	(per hundredweight)
Class IV Skim Milk Price:	9.96	(per hundredweight)
Butterfat Price:	1.5433	(per pound)
Nonfat Solids Price:	1.1068	(per pound)
Protein Price:	2.8751	(per pound)
Other Solids Price:	0.1727	(per pound)
Somatic Cell Adjustment Rate:	0.00080	(per 1,000 somatic cell count)
Product Price Averages:		
Butter	1.4459	(per pound)
Nonfat Dry Milk	1.2858	(per pound)
Cheese	1.5969	(per pound)
Dry Whey	0.3668	(per pound)

**CONVERSION**

LBS → KILOS: 2.2046  
AVERAGE EXCHANGE RATE (US → CAN)<sup>2</sup> DECEMBER 2009: \$1.0544

<sup>1</sup> Source: USDA: [Milk Price Announcements, Summaries, and Product Prices](#).

**Tracking U.S. Prices to Anticipate SMCPP Component Price Changes**

SMCPP Permit Holders should take note of dairy product pricing appearing on the Chicago Mercantile Exchange (CME) and dairy products prices collected by the USDA National Agricultural Statistics Service (NASS) which would help them to anticipate the resulting price changes that are likely to follow in the CDC's announced component prices for Special Milk Classes 5(a) and 5(b).

**NASS Dairy Products Prices Averages:** The [Dairy Market News Weekly Printed Reports](#) as well as Dairy Graphs for [Nonfat Dry Milk Price](#) (U.S. equivalent for skim milk powder), [Butter Price](#) and cheese prices ([Cheddar Block Price](#) and [Cheddar Barrel Price](#)) published by the USDA are good indicators of the price fluctuation that occurs on a weekly basis in the U.S. These transacted prices will influence the eventual NASS dairy products price averages announced each month (released on the last day of the month or in the first days of the following month, see 3 in the figure above). Note that CME and NASS dairy products price averages don't include any product specifications premium and delivery charges. For this reason, permit holders should use this information as an indicator of price trend and magnitude of change only.

**U.S. Milk Component Prices:** U.S. milk component prices (① and ②) are calculated<sup>1</sup> based on NASS dairy product price averages. The fact that there is a 60 day lag between U.S. and SMCPP pricing allows Permit Holders to anticipate the eventual increases or decreases that will be reflected in the Special Class component prices. Permit Holders who track this information will be able to make better informed purchasing decisions on their Special Class priced dairy ingredients.

**Example:** The following example summarises how an increase (↑) in U.S. dairy products prices in December 2009 (compared to the previous month) would result in an increase in the Special Class component prices announced for the SMCPP in February 2010.

The table below shows that U.S. selling prices for butter, nonfat dry milk and cheese have increased for the month of December 2009 (④) compared to the previous month.

Table 30--NASS Dairy Product Price Averages Used in Federal Milk Order Price Formulas, 2009 <sup>1/</sup>

Year and Month	Product Price Averages For:									
	Class I (Skim, Bfat.), Class II (Skim, Nonfat Solids)					Class II (Bfat.), Class III, Class IV, Components				
	Weeks ending	Butter	Nonfat dry milk	Cheese	Dry Whey	Weeks ending	Butter	Nonfat dry milk	Cheese	Dry Whey
	Dollars per pound					Dollars per pound				
<u>2009</u>										
Jan	12/6, 13	1.3262	0.8460	1.7989	0.1716	1/3, 10, 17, 24	1.0868	0.8318	1.2961	0.1696
Feb	1/10, 17	1.0914	0.8333	1.2895	0.1701	1/31, 2/7, 14, 21	1.0750	0.8215	1.1518	0.1567
Mar	2/7, 14	1.0731	0.8195	1.1414	0.1545	2/28, 3/7, 14, 21, 28	1.1289	0.8166	1.2611	0.1662
Apr	3/7, 14	1.1211	0.8152	1.2545	0.1632	4/4, 11, 18, 25	1.1665	0.8195	1.2771	0.1949
May	4/4, 11	1.1640	0.8181	1.3030	0.1852	5/2, 9, 16, 23, 30	1.2159	0.8318	1.1553	0.2317
Jun	5/9, 16	1.2051	0.8314	1.1562	0.2323	6/6, 13, 20, 27	1.2073	0.8461	1.1466	0.2693
Jul	6/6, 13	1.2187	0.8443	1.1459	0.2649	7/4, 11, 18, 25	1.1986	0.8422	1.1334	0.2912
Aug	7/4, 11	1.1747	0.8416	1.1339	0.2873	8/1, 8, 15, 22, 29	1.2030	0.8666	1.2605	0.2925
Sep	8/8, 15	1.2158	0.8695	1.2311	0.2938	9/5, 12, 19, 26	1.1811	0.9664	1.3522	0.2979
Oct	9/5, 12	1.1658	0.9541	1.3802	0.2942	10/3, 10, 17, 24	1.2245	1.0270	1.4110	0.3183
Nov	10/10, 17	1.2245	1.0299	1.4155	0.3186	10/31, 11/7, 14, 21, 28	1.3817	1.1120	1.5169	0.3471
<u>Dec</u>	11/7, 14	1.3532	1.1147	1.5113	0.3452	12/5, 12, 19, 26	④ 1.4459 ↑	1.2858 ↑	1.5969 ↑	0.3668
Avg.	----	1.1945	0.8848	1.3135	0.2401	----	1.2096	0.9223	1.2966	0.2585

<sup>1/</sup> Figures are the average of the applicable weekly prices weighted by the sales volume for the week. See columns labeled "weeks ending" for applicable weeks. The most recently released information for the week is used. Averages are computed by the Agricultural Marketing Service.

Source: NASS Dairy Products Price Averages are available online on USDA website (select Announcement Type: Class II, III, IV and Components, Data Series: Products Price, then select Year to Date): [Milk Price Announcements, Summaries, and Product Prices](#).

<sup>1</sup> NASS Price Formulas to calculate U.S. milk component prices (source: <http://www.ams.usda.gov>):  
 Butterfat Price = (Butter price – 0.1715) times 1.211  
 Nonfat Solids Price = (Nonfat dry milk price - 0.1678) times 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) times 1.03

As a result of this increase in dairy product price averages, U.S. milk component prices presented in the following table also increased for the month of December 2009 (5).

Table 32--Federal Milk Order Class II, Class III, and Class IV Milk and Component Prices, 2009

Year and Month	Release Date	Class II Price 1/	Class II Butterfat Price	Class III Price	Class III Skim Milk Price	Class IV Price	Class IV Skim Milk Price	Butterfat Price 2/ 3/	Nonfat Solids Price	Protein Price 3/	Other Solids Price 3/	Somatic Cell Adjustment Rate 4/
		\$/cwt.	\$/lb.	Dollars per cwt.				Dollars per pound				\$/count
2009												
Jan	1/30/09	10.41	1.1154	10.78	7.15	9.59	5.92	1.1084	0.6574	2.3638	-0.0304	0.00065
Feb	2/27	10.25	1.1011	9.31	5.68	9.45	5.82	1.0941	0.6472	1.9139	-0.0437	0.00058
Mar	4/3	10.36	1.1664	10.44	6.61	9.64	5.78	1.1594	0.6423	2.1973	-0.0339	0.00063
Apr	5/1	10.49	1.2119	10.78	6.80	9.82	5.81	1.2049	0.6452	2.2009	-0.0043	0.00064
May	6/5	10.71	1.2718	9.84	5.61	10.14	5.92	1.2648	0.6574	1.7454	0.0336	0.00058
Jun	7/2	10.79	1.2614	9.97	5.78	10.22	6.04	1.2544	0.6715	1.7283	0.0723	0.00057
Jul	7/31	10.87	1.2508	9.97	5.82	10.15	6.01	1.2438	0.6677	1.6970	0.0949	0.00057
Aug	9/4	10.86	1.2561	11.20	7.08	10.38	6.23	1.2491	0.6918	2.1009	0.0962	0.00063
Sep	10/2	11.01	1.2296	12.11	8.12	11.15	7.12	1.2226	0.7906	2.4243	0.1018	0.00068
Oct	10/30	11.93	1.2822	12.82	8.66	11.86	7.66	1.2752	0.8506	2.5584	0.1228	0.00071
Nov	12/4	13.24	1.4726	14.08	9.27	13.25	8.41	1.4656	0.9348	2.6991	0.1524	0.00076
Dec	12/31	14.25	1.5503	14.98	9.93	15.01	9.96	1.5433 ↑	1.1068 ↑	2.8751 ↑	0.1727 ↑	0.00080
Avg	---	11.26	1.2641	11.36	7.21	10.89	6.72	1.2571	0.7469	2.2087	0.0612	0.00065

Source: U.S. Component Prices are available online on USDA website (select Announcement Type: Class II, III, IV and Components, Data Series: Summary Table, then select Year to Date): [Milk Price Announcements, Summaries, and Product Prices](#)

The increases in U.S. milk component prices combined with the variation of the exchange rate (\$1.0544 in December 2009 vs. \$1.0604 in November 2009) translated into an increase in SMCPP component prices for the month of February 2010 (6), more specifically:

- Butterfat price in Classes 5(a) and (b) increased as a result of the increase of U.S. butterfat price.
- Protein price in Class 5(a) increased as a result of the increase of U.S. protein price.
- Other solids price in Class 5(a) increased as a result of the increase of U.S. other solids price.
- Protein and other solids price in Class 5(b) increased as a result of the increase in U.S. nonfat solids price.

**SPECIAL MILK CLASS PRICES 5(A) AND 5(B) FOR THE MONTH OF: FEBRUARY 2010**

Milk Class	Butterfat (\$/Kg)	Protein (\$/Kg)	Other Solids (\$/Kg)
5(a)	3.5874	6.3157	0.4142
*	4.7% ↑	5.9% ↑	12.7% ↑
5(b)	3.5874	2.5728	2.5728
*	4.7% ↑	17.7% ↑	17.7% ↑

\*Change (%) from previous month

## Impact of Exchange Rate

In addition to the monthly changes that occur in U.S. dairy product and components prices, exchange rate volatility is another factor that impacts on SMCPP component prices. A strong Canadian dollar will actually serve to decrease the price of milk components in the SMCPP while a weak Canadian dollar will have the reverse effect.

For example, even though there was an increase in U.S. components prices in April 2009 (7, significant rise of butterfat price), the CAN dollar also strengthened (\$1.2648 CAN in March vs. \$1.2240 in April) which translated into only a slight increase in SMCPP butterfat price and a decrease in SMCPP protein and other solids component prices for the month of June (8).

Table 32--Federal Milk Order Class II, Class III, and Class IV Milk and Component Prices, 2009

Year and Month	Release Date	Class II Price 1/	Class II Butterfat Price	Class III Price	Class III Skim Milk Price	Class IV Price	Class IV Skim Milk Price	Butterfat Price 2/ 3/	Nonfat Solids Price	Protein Price 3/	Other Solids Price 3/	Somatic Cell Adjustment Rate 4/
		\$/cwt.	\$/lb.	Dollars per cwt.				Dollars per pound				\$/count
2009												
Jan	1/30/09	10.41	1.1154	10.78	7.15	9.59	5.92	1.1084	0.6574	2.3638	-0.0304	0.00065
Feb	2/27	10.25	1.1011	9.31	5.68	9.45	5.82	1.0941	0.6472	1.9139	-0.0437	0.00058
Mar	4/3	10.36	1.1664	10.44	6.61	9.64	5.78	1.1594	0.6423	2.1973	-0.0339	0.00063
Apr	5/1	10.49	1.2119	10.78	6.80	9.82	5.81	1.2049	0.6452	2.2009	-0.0043	0.00064
May	6/5	10.71	1.2718	9.84	5.61	10.14	5.92	1.2648	0.6574	1.7454	0.0336	0.00058
Jun	7/2	10.79	1.2614	9.97	5.78	10.22	6.04	1.2544	0.6715	1.7283	0.0723	0.00057
Jul	7/31	10.87	1.2508	9.97	5.82	10.15	6.01	1.2438	0.6677	1.6970	0.0949	0.00057
Aug	9/4	10.86	1.2561	11.20	7.08	10.38	6.23	1.2491	0.6918	2.1009	0.0962	0.00063
Sep	10/2	11.01	1.2296	12.11	8.12	11.15	7.12	1.2226	0.7906	2.4243	0.1018	0.00068
Oct	10/30	11.93	1.2822	12.82	8.66	11.86	7.66	1.2752	0.8506	2.5584	0.1228	0.00071
Nov	12/4	13.24	1.4726	14.08	9.27	13.25	8.41	1.4656	0.9348	2.6991	0.1524	0.00076
Dec	12/31	14.25	1.5503	14.98	9.93	15.01	9.96	1.5433	1.1068	2.8751	0.1727	0.00080
Avg	---	11.26	1.2641	11.36	7.21	10.89	6.72	1.2571	0.7469	2.2087	0.0612	0.00065

Source: U.S. Component Prices are available online on USDA website (select Announcement Type: Class II, III, IV and Components, Data Series: Summary Table, then select Year to Date): [Milk Price Announcements, Summaries, and Product Prices](#)

### SPECIAL MILK CLASS PRICES 5(A) AND 5(B) FOR THE MONTH OF: JUNE 2009

Milk Class	Butterfat (\$/Kg)	Protein (\$/Kg)	Other Solids (\$/Kg)
<b>5(a)</b>	3.2513	5.6124	0.0001
	* 0.6% ↑	-3.1% ↓	0.0%
<b>5(b)</b>	3.2513	1.7410	1.7410
	* 0.6% ↑	-2.8% ↓	-2.8% ↓

\*Change (%) from previous month

### **Class 5(c) Calculation**

The CDC uses a different methodology to calculate Class 5 (c) component prices which includes U.S. as well as world market price indices.

The method of calculation takes into account U.S., Oceania and Western Europe skim milk powder (SMP) prices reported by the USDA. SMP prices are converted to a component price for protein and other solids. Exchange rate, ocean transport and processing costs are also taken into consideration. The lowest component price result achieved between Oceania, Western Europe and the U.S. is selected and announced by the CDC for the following month.

The same basic methodology is used to calculate the butterfat component price for Class 5(c). U.S., Oceania and Western Europe butter prices reported by the USDA are taken into account. Butter prices are converted to a component price for butterfat. Exchange rate, ocean transport and processing costs are also taken into consideration. An exception is made in this pricing methodology which uses the average of the two lowest butterfat component prices achieved.

### **CONTACT INFORMATION**

For more information on the Special Milk Class Permit Program and the pricing methodology please contact:

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