

Revised Text for Preliminary Analysis
for Hearing Concerning Class III and IV Make Allowances

(Revisions are in bold.)

[[Page 546, 2nd full paragraph]]

Preliminary Analysis

The Department has conducted a preliminary analysis in order to assist the industry in considering the effects of increasing manufacturing allowances, commonly referred to as ``make allowances''. While the proposal seeks to amend the product pricing formulas used to price Class III or Class IV milk pooled under Federal milk marketing orders, changes in these formulas also would affect the prices of Class I and Class II milk pooled on Federal milk marketing orders.

Current make allowances relied on to establish Class III and Class IV prices for all Federal orders are based on three sources: (1) 1998 Dairy Product Plant Costs, USDA/Rural Business Cooperative Service (RBCS) Technical Assistance Project, (2) Weighted Average Manufacturing Costs for Butter, Nonfat Powder, and Cheddar Cheese January 1997 to April 1999, California Department of Food and Agriculture (CDFA), and (3) Dry Whey Total Costs of Manufacturing, 1999, National Cheese Institute (NCI)-sponsored survey. The make allowances for cheese, butter, and nonfat dry milk are based on the data from the first two sources and have been in effect since January 2001. The dry whey make allowance is based on data from the third source and it has been in effect since April 2003.

The following preliminary analysis is quantitative and based on the changes in processing costs for butter, cheese, and nonfat dry milk reported by the CDFA for 1997-1999 and 2004. The analysis, which was conducted for illustrative purposes, includes an increase in the whey make allowance of 10 percent as CDFA did not begin surveying costs of manufacturing whey powder until 2003. California cheese-making costs over the same period increased by a much smaller amount.

Manufacturing Cost Data

Currently, the most comprehensive data available concerning dairy manufacturing costs are provided by CDFA's California Survey of Weighted Average Manufacturing Costs (CDFA survey, various issues). The updated RBCS manufacturing cost survey is not yet available. Current Federal order make allowances are partially based upon data provided in the CDFA survey released in February 2000 covering the period from January 1997 through April 1999 (CDFA 1997-1999 survey). The most recent CDFA Survey was released on November 18, 2005, and covers the 2004 period (CDFA 2004 survey). Table 1 illustrates the changes in manufacturing costs as reported in the CDFA 1997-1999 and 2004 surveys. [GRAPHIC] [TIFF OMITTED] TP05JA06.032

Economic Analysis Framework

The following estimated impacts of increasing make allowances were measured as changes from the 2004 USDA dairy baseline (USDA

Agricultural Baseline Projections to 2014, OCE-2005-1; <http://www.usda.gov/agency/oce/waob/commodity-projections/proj.htm>). The analysis was accomplished using an econometric model of the dairy industry developed by Dairy Programs. The USDA baseline and the model baseline assume: (1) The Milk Price Support Program will continue unchanged; (2) the Dairy Export Incentive Program will be utilized at the maximum extent allowed beginning in the 2005/06 fiscal year; and (3) the Federal Milk Marketing Order Program will continue unchanged.

During the last five years, milk marketings under the Federal order milk program have been about 68 percent of total U.S. milk marketings. Marketings under the Federal milk order program have accounted for about 61 percent of all milk used for manufacturing. Given the prominence of Federal order marketings in the U.S. dairy manufacturing industry, prices paid for manufactured milk under Federal orders are consistent with the value of milk for manufacturing in the rest of the United States. Similarly, the fluid prices in non-Federal order markets reflect fluid

[[Page 547]]

prices established as Federal order minimum Class I prices. Therefore, U.S. milk marketings in this analysis are estimated as a function of the U.S. all-milk price. For the USDA baseline period, the Federal order share of total U.S. milk marketings is estimated as a proportion from recent data.

The econometric model used in this preliminary analysis includes demands for fluid milk products and manufactured dairy products. The demand for fluid milk products and for manufactured dairy products are functions of price, per capita consumption, and population. Retail prices of fluid milk and Class II soft manufactured products are assumed to respond penny for penny to changes in the milk cost of these products. Wholesale and retail margins are assumed unchanged from the USDA baseline for all proposals analyzed. Wholesale prices for cheese, butter, nonfat dry milk, and dry whey reflect supply and demand conditions for each of these products. The milk supply for manufacturing these hard products is the result of milk marketings minus the volumes demanded for Class I and Class II products. The remaining volume is allocated to Class III and Class IV according to returns to manufacturing in each class.

The model and Federal order price formulas use national manufactured dairy product prices to establish the Class prices. Class prices, quantities of milk marketed through the Federal order system, a blend price, and Federal order cash receipts are projected.

The quantity of milk supplied is a function of the all-milk price, feed prices, cow slaughter prices, and trend. The all-milk price, i.e., the average price paid for milk on an f.o.b. plants basis, is estimated as a function of the wholesale prices for dairy products and Federal order prices. The relationship implicitly reflects average manufacturing costs, over-order payments for milk, and prices paid for milk outside of the Federal order system.

Make Allowance Scenarios

Three illustrative scenarios are presented that estimate the impact on producers, consumers, and processors. Each scenario includes make allowance increases of 36 percent for butter, 15 percent for nonfat dry milk, and 10 percent for dry whey. The cheese make allowance is

increased successively in each scenario by 1 cent per pound (6 percent), 2.5 cents (15 percent), and 4 cents (24 percent). These successive cheese make allowance scenarios illustrate the interaction of the protein and butterfat prices and the effects on the Class III and Class IV prices. All three scenarios and the illustrative changes in make allowances beginning with fiscal year 2005/06 are detailed in Table 2.

[GRAPHIC] [TIFF OMITTED] TP05JA06.033

Results

The results of the increased make allowances in the Class III and Class IV formulas are summarized using five-year, 2005/06 to 2009/10, average changes from the baseline. Results in the Federal order system are in the context of the larger U.S. market.

Increased make allowances generally result in reduced Class III and Class IV milk prices and pool revenues. Increased make allowances also have an impact on Class I and Class II prices. Class II prices at 3.5 percent butterfat decline in concert with changes in Class IV prices. The Class I price reduction depends upon the resulting higher of the reduced Class III or IV advanced values. The small increases in the quantity of fluid milk demanded are not sufficient to offset the effects of the price decline, and a lower all-milk price and reduced milk marketings result. Reduced marketings result in slightly increased dairy product prices, tempering the all-milk price decline.

Across the three scenarios, all Federal order class and blend prices fall, the U.S. all-milk price falls, and dairy product prices increase. The interaction between the butterfat and the protein prices determines the relative effects on the Class III and Class IV prices. As the cheese make allowance increases from one scenario to the next, the protein price impact shifts from an increase to a decline while the butterfat price impact shifts from a decline to an increase.

These preliminary results generally can be divided into two periods, the first two years and the last three years of the 5 year projection period, due to the lagged adjustments in the milk supply responses. Once producers respond to lower prices with less production, the effects on the all-milk price and the average Federal order blend price stabilize at levels less than initial changes from the USDA baseline. The differences are more notable for Scenarios 2 and 3, with the greater increases in the cheese make allowance.

Scenario 1

For Scenario 1, the butter make allowance is increased by \$0.0411 per pound (to \$0.1561), and the nonfat dry milk make allowance is increased by \$0.0215 per pound (to \$0.1615). These increases, which are for illustrative purposes, match the changes in

[[Page 548]]

manufacturing costs from the CDFA 1997-1999 and 2004 surveys.

It is not feasible, for purposes of this analysis, to use the CDFA survey as a basis to consider changes to the make allowance for whey. The 1997-1999 CDFA survey did not include dry whey. The most recent CDFA survey shows the manufacturing cost for whey is \$0.2673 per pound. A make allowance of \$0.20 per pound is used by CDFA in the California Class 4b formula. The baseline average price for dry whey during the

five-year projection period is **\$0.1838** per pound.\1\ While the Federal order formulation allows for a negative other solids price, it does not seem realistic to set up a scenario for which the other solids price is usually negative. For the purpose of our analysis, the whey make allowance for Scenario 1 is simply increased by 10 percent (\$0.0159) to \$0.1749 per pound.

\1\ The whey price has increased significantly in recent months. Baseline projections for whey, developed in November 2004 appear to be lower than expected given current conditions.

The change in manufacturing costs for cheese reflected in the CDFA surveys released February 2000 to November 2005 was \$0.0076 per pound. Anecdotal evidence suggests that manufacturing costs for cheese on average throughout the United States may have increased by more than the CDFA survey value. To illustrate the effects of changing the cheese make allowance relative to the other make allowances, the cheese make allowance varies for each scenario. Scenario 1 increases the cheese make allowance by \$0.01 per pound to \$0.1750 (Table 3).

Under this scenario, protein prices increase while butterfat prices decline. Increases in make allowances result in declines in the Class prices and the all-milk price. The accompanying decrease in milk marketings causes wholesale dairy product prices to rise. However, the negative effect on the protein price of this relatively small change in the cheese make allowance is more than offset by the positive effect of the decline in the butterfat price. Thus, while the butterfat, other solids, and nonfat solids prices fall due to make allowances increases, the increase in the cheese make allowance is not sufficient to keep the protein price from rising.

Producers

The all-milk price at test falls by an average \$0.03 per cwt over the (5-year) 2005/06-2009/10 projection period. Producers respond by reducing milk marketings by an annual average 120 million pounds. Producer revenue falls by \$72 million on average per year.

The Federal order blend price for milk testing at 3.5 percent butterfat falls by \$0.05 per cwt averaged over the five-year period, and by \$0.03 per cwt over the last three years. Federal order cash receipts fall by a five-year average of \$77 million, and by an average \$53 million during the last three of the five years, as compared to a five-year baseline average of **\$18.874** billion. The greatest average reduction is in Class IV receipts (\$28 million), and the smallest reduction is in Class I receipts (\$8 million).

Milk Manufacturers and Processors

Wholesale prices of manufactured products rise slightly as the milk supply is reduced. The protein price increases in each of the five years, by about \$0.046 per pound in the last two years. The butterfat price declines in all years, and by about \$0.012 per pound in the last three years.

The Class IV price at 3.5% butterfat falls by \$0.18 per cwt on average. Since Class IV advanced value is the mover for Class II, the Class II price at 3.5% butterfat falls by the same amount. The Class

III price at 3.5% butterfat is reduced by \$0.02 per cwt, with the decreases in the butterfat and other solids prices largely offset by the protein price increases. The Class I price at 3.5% butterfat falls by \$0.03 per cwt. While the baseline indicates the Class IV advanced value as the mover in the 2005/06 fiscal year with the Class III advanced value as the mover in the other years, for Scenario 1 Class III becomes the mover throughout the projection period. Class uses on average rise for Classes I and II and fall for Classes III and IV.

Class I prices decline and use increases in the first two years. However, for the last three years, the Class III and Class I skim milk prices increase slightly, as does the Class I milk price at class butterfat test which is less than 3.5 percent. Thus, Class I use rises slightly in the first two years, and declines slightly in the last three.

The aggregate obligation of processors and manufacturers to the Federal order revenue pools fall by a 5-year average of \$77 million, with 30 percent of the savings to soft product manufacturers, 22 percent accruing to cheese manufacturers, and 36 percent accruing to butter and nonfat dry milk manufacturers.

Consumers

On average, the retail fluid milk price is virtually unchanged, falling by \$0.0017 per gallon, during the projection period.\2\ Increases in Federal order Class I use are projected in the first two years while small decreases are projected in the last three years, averaging an increase of 4 million pounds. Federal order Class II use increases slightly each year (less than one percent).

\2\ Throughout this discussion, we make the simplifying assumption that changes in prices are passed on to consumers in constant margins.

Consumers of manufactured dairy products face slightly higher average prices. Price increases are \$0.0181 per pound (1.2 percent) for cheese, \$0.0324 per pound (1.8 percent) for butter, \$0.0054 per pound (0.6 percent) for nonfat dry milk, and \$0.0005 per pound (0.3 percent) for dry whey. This is caused by a 5-year average U.S. decline of 181 million pounds of milk available for cheese, butter, and nonfat dry milk (0.17 percent decline).

Scenario 2

Scenario 2 has the same make allowances as Scenario 1, except for cheese which is increased to \$0.1900 per pound, \$0.0250 above the current level (Table 3). At these levels, the protein price change starts out negative, becoming positive in the last 3 years. Butterfat prices decline in all but one year.

Producers

The all-milk price at test falls by \$0.06 per cwt on average and \$0.03 per cwt for the last three years. Producers respond with a 5-year average decrease in milk marketings of 226 million pounds. Producer revenue falls by \$140 million on average per year.

The average Federal order blend price at 3.5 percent butterfat test falls by \$0.09 per cwt averaged over 5 years and by an average \$0.06 in the last 3 years. Federal order cash receipts fall by an average \$135 million and by an average \$101 million over the last 3 years, as compared to a baseline 5-year average of **\$18.874** billion. The greatest 5-year average reductions are in Class III receipts at \$60 million followed by Class I receipts at \$38 million. The smallest reduction is in Class II receipts (\$13 million).

Milk Manufacturers and Processors

Wholesale prices of manufactured products rise as the milk supply is reduced. As expected, the increase in product prices are greater when compared to Scenario 1. The protein price falls in the first two years of the projection period but rises thereafter, reaching about \$0.018 per pound in the last two years. The projected butterfat

[[Page 549]]

price falls in all but one year, falling by about \$0.005 per pound in the last two years.

Class III is the Class I price mover for all projection years except 2005/06. On average, the Class I price (at 3.5 percent butterfat) falls by \$0.09 per cwt, the Class III price falls by \$0.10 per cwt, and the Class II and IV prices fall by \$0.11 per cwt. Class I and II uses rise each year in response to price declines. Class III and IV uses fall as available milk volume declines. The aggregate obligation of processors and manufacturers to Federal order pools falls by a 5-year average of \$135 million, with 44 percent savings accruing to cheese manufacturers and 28 percent accruing to fluid processors.

Consumers

There is little change in the price of fluid milk at retail, averaging a decrease of \$0.0076 per gallon for the five year projection period. Federal order Class I use increases a 5-year average of 17 million pounds per year as compared to a baseline average of **46.038** billion pounds. Federal order Class II use increases by 27 million pounds per year as compared to a baseline average of **15.664** billion pounds.

Consumers of hard manufactured dairy products face slightly higher average prices. Price increases are \$0.0245 per pound (1.6 percent) for cheese, \$0.0385 per pound (2.1 percent) for butter, \$0.0098 per pound (1.1 percent) for nonfat dry milk, and \$0.0006 per pound (0.3 percent) for dry whey. This is caused by a U.S. decline of 278 million pounds of milk available for cheese, butter, and nonfat dry milk (0.26 percent decline).

Scenario 3

Scenario 3 uses the same make allowances as the first two scenarios with the exception of cheese which is increased by \$0.0400 per pound above the baseline to a level of \$0.2050 (Table 3). At these levels, the protein price falls below baseline levels throughout the projection period while the butterfat price rises above baseline levels in all but the first year of the projection period.

Producers

The all-milk price at test falls by an average \$0.09 per cwt over 5 years, and by about \$0.05 per cwt for the last 3 years. Producers respond with a decrease in average milk marketings of 327 million pounds. Producer revenue falls by \$207 million on average per year.

The average Federal order blend price at 3.5 percent butterfat falls by \$0.13 per cwt averaged over 5 years and by an average \$0.09 per cwt in the last 3 years. Federal order cash receipts fall by an average \$191 million over 5 years, and by an average \$147 million over the last 3 years, as compared to a baseline 5-year average of **\$18.874** billion. The greatest 5-year average reductions are in Class III receipts at \$103 million, followed by Class I receipts at \$65 million, and the smallest reduction is in Class II receipts (\$3 million).

Milk Manufacturers and Processors

Wholesale prices of manufactured products rise as the milk supply is reduced. As expected, the increase in product prices is greater than for either of the other two scenarios. The protein price falls in all years, averaging \$0.0336 per pound below baseline levels but the reduction is attenuated to \$0.0086 per pound by the last year. The butterfat price rises above baseline levels in all years except the first, averaging an increase of \$0.0039 per pound above baseline levels.

As with the baseline, the Class III price is the Class I price mover for all years except 2005/06. While Class I and III prices fall in all years, Class II and IV prices at 3.5 percent butterfat fall below baseline levels in the first 2 years and are virtually unchanged in the final 3 years. Class IV and Class II prices at class butterfat tests increase in the last 3 years of the period. Class II use rises in the first 2 years and declines slightly in the last 3 years with the slight increases in the Class II price at class butterfat test.

The aggregate obligation of processors and manufacturers to the Federal order revenue pools falls by a 5-year average of \$191 million, with 54 percent of the savings accruing to cheese manufacturers and 34 percent accruing to fluid processors.

Consumers

As with the other scenarios, there is little change in retail fluid milk prices which fall \$0.0130 per gallon on average over the projection period. Class I use increases an average of 29 million pounds per year, compared to a baseline average of **46.038** billion pounds. Class II use increases by negligible amounts on average during the projection period.

Consumers of hard manufactured dairy products face slightly higher average prices. Price increases are \$0.0309 per pound (**2.0** percent) for cheese, \$0.0444 per pound (**2.4** percent) for butter, \$0.0142 per pound (1.6 percent) for nonfat dry milk, and \$0.0008 per pound (0.4 percent) for dry whey. This is caused by a U.S. decline of 370 million pounds of milk available for cheese, butter, and nonfat dry milk (0.35 percent decline).

Preliminary Conclusions

Increasing the make allowances will generally result in lower

Federal order class and blend prices, lower all-milk prices, slightly higher manufactured dairy product prices, and slightly lower fluid milk prices. Federal order cash receipts and U.S. producer revenues decline slightly. Manufacturing plants have higher dairy product prices on the revenue side and lower Federal order class and all-milk prices on the cost side.

The scenarios also demonstrate that seemingly small changes in the relative values of the various make allowances can result in possibly unexpected changes in the relative values of the manufacturing class prices. This is caused in part by the interaction between the quantities of milk supplied and the demands for nonfat solids and butterfat in the various dairy products. Further, the inverse relationship between the butterfat price and protein price in the Federal order protein formula also contributes to these circumstances.
BILLING CODE 3410-02-P

[[Page 550]]

[GRAPHIC] [TIFF OMITTED] TP05JA06.034

[[Page 551]]

[GRAPHIC] [TIFF OMITTED] TP05JA06.035