



BEFORE THE UNITED STATES DEPARTMENT
OF AGRICULTURE
AGRICULTURE MARKETING SERVICE

In the Matter of Milk in California
Notice of Hearing on a Proposal to
Establish a Federal Milk Marketing
Order

7 CFR Part 1051
Docket No.: AO-15-0071
AMS-DA-14-0095

Clovis, California, November 2015

Testimony of Rob Blaufuss

Part 4

Class I Formula Revisions

Prior to providing my testimony regarding the fortification of fluid milk products, I would first like to make revisions to the Dairy Institute of California's hearing proposal. The revisions would make adjustments to the Class I price calculations as found in §1051.50 (a)(d) ^{stand}

(d) Class I Fluid Carrier Price = (Class I Skim Price * 0.24)/**87.5**

(a) Class I Price = (Butterfat Price per Pound * 3.5) + (Class I SNF Price per Pound * 9) + (Class I Fluid Carrier Price per Pound * **87.5**)

Fortification Credit Revision

Proponents of Proposal 2 will also revise the fortification credit calculation currently found in §1051.60^(a)(6) for both Nonfat Dry Milk and Condensed Skim. The revised fortification language will mirror current California statutory language. The Stabilization Plan language as it relates to condensed skim states the following:

Each handler, using condensed market skim milk for fortifying Class 1 products, may deduct for each pound of milk solids-not-fat in such condensed market skim milk a maximum charge of nine and eighty-seven hundredths cents (\$0.0987). This deduction shall be allowed in calculating the gross pool obligation of such handler, pursuant to the provisions of the Pooling Planⁱ.

Fortification of Fluid Milk in California

As a result of California's higher fluid milk standards (as compared to Federal Standard of Identities), differences exist in raw milk costing compared to the Federal Order system. In the Federal Order system, per FDA, fluid milk standards have a minimum milk solids nonfat level of ~~8.7%~~ regardless of fat content. In California the base fluid milk standards are set at 8.7% MSNF **8.25%**

for whole, 10% MSNF for reduced fat milk, 11% MSNF for low-fat milk and 9.0% MSNF for skim milk. The elevated level of skim required for reduced fat and low-fat milks in California fluid milks necessitates that Class 1 processors in the state fortify their milk, either with condensed skim or nonfat dry milk.

Currently, in all Federal Orders, the Class I mover price in any given month is set by just two factors, skim and butterfat. In California however, there are three factors which are used to set Class 1 prices. These three factors are butterfat, solids nonfat and fluid carrier. The California Class 1 price splits the skim value into two different value streams, solids nonfat and fluid carrier. In order to insure equal raw product costing under CA fluid milk standards, a three factor Class I price is necessary. The goals in setting up a system of a three factor Class I pricing system is to make plants indifferent as to who they receive their milk from and to ensure the orderly movements of milk in the state. Those plants which receive higher solids milk will pay a higher price for milk coming into the plant compared to those plants with lower solids milk. The low test milk comes at a lower cost to those plants, allowing them to pay for a higher level of fortification and not be uncompetitive with a plant receiving high test milk.

At the onset of the initial discussion around the possibility of California Federal Order hearing, I began analyzing what the impact would be to Class I milk costing under a Federal Order system compared to current California pricing mechanisms. Of particular interest was the impact of fortification costing differences between the Federal Order and California. The process of calculating the cost to fortify milk in California is fairly straight forward. The additional solids used to fortify the fluid milk product are brought into the plant on a Class 2 basis. In the handler report however there is an adjustment made, be it an increase or decrease, to convert the Class 2 skim cost of fortification into a Class 1 price. At the end of the day, all solids used to

manufacture a Class 1 fluid milk product in California are priced at the Class 1 price. For those plants which use condensed skim, a \$0.0987/lb credit is applied for each pound of solids used to fortify the fluid milk product.

The Federal Orders fortification costing is handled noticeably different than current California costing. Federal Orders bring in milk solids nonfat used in fortification as a receipt into the plant and then allocates the vast majority of the skim as Class IV utilization. USDA then converts the receipts to a skim equivalent using set factors. The difference between the receipt factor volume and the utilization factor volume represents the volume increase in Class I volume due to fortification. This increased Class I volume is what is better known as displacement. The full list of fortification factors can be found in Table 1 in Exhibit 148.

In consultation with Pacific Northwest Federal Order staff, I developed out a time series model to calculate the full per cwt Class I costs, factoring in the costs associated with the USDA fortification regulations. I will show the differences in per-gallon costs for 2% and 1% milks as well as whole and skim milks for manufacturers with high (9.2% SNF), low (8.8% SNF) and standard test (actual CA SNF levels) milk using both Dairy Institute's 3 factor Class I price formula and the current Federal Order two factor Class I price formula. Both analyses will use the Dairy Institute's proposed pricing formulas and adjusted make allowances. I will illustrate just how much of an impact not having a three factor Class I formula has on a plants ability to remain competitive in the market.

From a Dean Foods perspective, condensed skim is the preferred method to fortify fluid milk products in California to meet the fluid standards. In my analysis I will focus solely on fortification costing using condensed skim. My analysis used what is called Pearson's Square to arrive at the combination of market test skim milk and condensed skim to reach the required

MSNF level per the California fluid milk standards for both 2% and 1%. Pearson's Square is a mathematical formula which calculates what pounds of two different testing products (milk and condensed) are needed to arrive at a specified number of pounds at a specific skim test.

To calculate the skim equivalent of the fortifying agent for a two factor pricing system, I multiplied the pounds of condensed skim needed to fortify a cwt of milk standardized to either 2% or 1% milkfat by their respective USDA fortification factors. My analysis assumes a condensed skim solids nonfat percentage of 33.5%. This level of solids nonfat in the fortifying agent, per USDA guidelines, equals a volume factor of 0.904 and a Class IV fortification factor of 2.709. Multiplying the pounds of condensed needed to fortify 2% and 1% milk by their respective factors provides the skim equivalent pounds which will then be used to calculate the cost of fortification. Once the skim equivalent pounds of the fortifying agent are known I was then able to calculate the value of fortification. There are two separate calculations made in the fortification cost buildup. The first step is to multiply the skim equivalent pounds assigned to the volume factor by the per-pound Class I price (at a \$2.10/cwt base differential level). Next, the skim equivalent pounds allocated to fortification is multiplied by the per-pound Class IV skim price.

of exhibit 148

The fortification and milk cost build up for milk at test can be found in Table 3[^]. This same model discussed just now was then used to calculate milk and fortification costs for producer milk at 9.2% and 8.8% SNF levels to test how differences in the MSNF content of producer milk impacts raw product costing. Using the model just laid for a two factor Class I pricing system, I then calculated the milk cost in California with a three factor Class I pricing system. The only functional difference between the two factor and three factor model is that the

skim cost portion is broken into two separate cost categories, solids nonfat and fluid carrier. The three factor pricing calculation for California milk at test can be found in Exhibit 4 of Exhibit 148.

Using the Class I pricing formula as laid out in the Dairy Institute hearing proposal and actual commodity prices from 2010 – 2014, I calculated per-gallon costs for whole, reduced fat, low-fat and skim milks. Also factored into the per-gallon cost build up was the fortification and displacement costs to fortify reduced fat and low-fat milks to meet the California fluid milk standards. A shrink factor of 1% was assumed for all fat categories. The final piece of the total per-gallon cost buildup is the fortification credits. The total level of fortification credits are estimated using the Dairy Institute’s proposal and are adjusted to reflect the solids nonfat content of the milk coming into the plant. Dairy Institute language would have provided the maximum allowed fortification credit throughout 2010 – 2014 of \$0.0987/lb of skim solids. The level of fortification credit was corrected to reflect the percentage of MSNF in producer milk, be it 8.8%, 8.9% or 9.2%.

The per-gallon cost differences of fluid milk products show notable differences under a three factor Class I pricing system compared to ~~the~~ a two ^{factor} pricing formula. The key difference is that while prices for reduced fat and low-fat milks are higher under a three factor formula than they would be under a two factor formula, the price gap between “high” test milk and “low” test milk is much flatter. As Table 2 of Exhibit 148 shows, a three factor Class I pricing formula levels the competitive playing field by significantly reducing the per-gallon price gap between a plant taking in high solids milk and a plant which takes in low solids milk.

Under a two factor price formula the 2010-2014 per-gallon cost of reduced fat milk at a high test skim averaged \$1.6171 while the low test skim averaged \$1.6565, a difference of \$0.0394 per gallon. That price difference averaged \$0.0382/gallon for low-fat milk over that

same period. In comparison the 2010-2014 reduced fat per-gallon cost with high test skim milk under a 3 factor formula averaged \$1.6815 while the low test skim milk per-gallon price averaged \$1.6810, a difference of only \$0.0005 per gallon. Lowfat per-gallon costs for high and low test skim solids milk under a three factor pricing formula averaged \$1.6234 and \$1.6228, respectively, a difference of only \$0.0006 per gallon.

Given the nature of the California fluid milk market the \$0.0394 and \$0.0382 per gallon price advantage enjoyed by plants taking in milk with high nonfat solids would represent a significant competitive price advantage over those plants which are taking in low nonfat solids milk. This per-gallon price gap would give an incentive to fluid processors to procure milk from those farms which have a higher level of milk solids while at the same ^{time} jettisoning those farms that are producing milk with lower solids levels. Shifting from using milk from Holstein herds to Jersey herds could potentially lead to disorderly marketing for no other reason than to take advantage of the two factor Class I pricing regulations. As my calculation shows, the competitive advantage enjoyed by a plant taking in high nonfat solids milk is significantly reduced in a Class I pricing system which splits the skim pricing into two separate components, nonfat solids and fluid carrier. It is also important to note that a three factor Class I pricing formula would represent the status quo for Class 1 in California. Those involved in the fluid milk industry in the state have a strong understanding and comfort level in a pricing formula which splits the value of skim into two separate components, solids nonfat and fluid carrier. The three factor Class I pricing formula, per my analysis, would actually lead to higher per-gallon costs for whole, reduced fat, lowfat and skim milks. Despite this, Dean feels that a three factor pricing formula is necessary in order to ensure orderly conditions in the California Class I market.

ⁱ Stabilization and Marketing Plan for Market Milk, as Amended, for the Southern California Marketing Area. P.14.
(https://www.cdfa.ca.gov/dairy/pdf/hearings/2015/SOCAL_STAB_PLAN76.pdf).