



International Dairy Foods Association
Milk Industry Foundation
National Cheese Institute
International Ice Cream Association

UNITED STATES DEPARTMENT OF AGRICULTURE BEFORE THE SECRETARY OF AGRICULTURE

In re:) **Docket Nos. AO-14-A77, et al.; DA-07-02**
Milk in the Northeast and)
Other Marketing Areas)
)

POST - HEARING BRIEF OF THE INTERNATIONAL DAIRY FOODS ASSOCIATION

This post hearing brief is submitted on behalf of the International Dairy Foods Association (IDFA), a trade association representing manufacturers, marketers, distributors, and suppliers of fluid milk and related products, ice cream and frozen dairy desserts, and cheese. IDFA represents the nation's dairy manufacturing and marketing industries and their suppliers, with a membership of 530 companies representing a \$90-billion a year industry. IDFA is composed of three constituent organizations: the Milk Industry Foundation (MIF), the National Cheese Institute (NCI) and the International Ice Cream Association (IICA). IDFA's 220 dairy processing members run more than 600 plant operations, and range from large multi-national organizations to single-plant companies. Together they represent more than 85% of the milk, cultured products, cheese and frozen desserts produced and marketed in the United States.

As buyers and processors of milk, the members of IDFA and its constituent organizations have a critical interest in these hearings. Most of the milk bought and handled by IDFA members is purchased under the Federal Milk Marketing Orders promulgated pursuant to the Agricultural Marketing Agreement Act of 1937 (the "AMAA").

In summary, the hearing record is very clear. For the reasons contained in the hearing record cited below, USDA should adopt Proposals 1, 9 and 12. USDA should make no other changes to the Class III and Class IV product price formulas as a result of this hearing.

Furthermore, there is a particularly pressing need to update the current make allowances to reflect true manufacturing costs. Because make allowances provide the sole means by which manufacturers can attempt to cover the cost of manufacturing, emergency action on Proposal 1 is warranted.

I. Before turning to the specific Proposals at hand, IDFA would observe that USDA should not base its decisions on the pending Proposals to change make allowances, yield factors and wholesale dairy product prices used in the product price formulas on dairy farm financial conditions.

Several witnesses at the hearing presented testimony and exhibits regarding the financial condition of dairy farm operations. It is important to note that, having adopted the use of product price formulas with their reliance on make allowances and yield factors as the sole basis for manufacturers to make and pay for necessary investments in processing equipment and operations, the short term financial condition of dairy farm operations provide no direct information useful to setting any of the factors in the product price formulas at issue in this hearing. As USDA has always observed, the costs of farm operations are instead captured indirectly through the supply and demand for finished products and farm milk.

In fact, information on the short term financial conditions on dairy farm operations can be very misleading in an industry which must, by the very nature of the inherent biological lags in breeding and raising milk cows, focus on longer term trends. Recent USDA reports show that the dairy industry is experiencing a record year for farm milk prices. According to USDA's World Agricultural Outlook Board, milk production is expected to surge in the coming 18 months "as producers respond to strong milk prices by expanding cow herds through next year," and "demand is expected to continue to support milk prices at record levels in 2007 and near record levels in 2008. (USDA, World Agricultural Outlook Board, World Agricultural Supply and Demand Estimates, 12 September 2007 4-5) In addition, USDA's Economic Research Service recent website report entitled 2007 Net Farm Income Is Forecast To Be \$87.1 Billion notes that "a significant rise in milk prices more than offset higher feed costs for corn, soybeans, and hay. Consequently, cash receipts from the sale of dairy products are forecast to rise 51.2 percent (\$12 Billion) in 2007."

(<http://www.ers.usda.gov/Briefing/FarmIncome/nationalestimates.htm>)

One witness, Mr. Ben Yale, presented detailed information purporting to show that dairy producers have lost gross revenue due to changes USDA has made in the product price formulas first implemented in January 2000 (Exhibit 33, KK). In the first place, nothing in Mr. Yale's analysis on these exhibits provides actual manufacturing plant information on the costs of processing or on the yields of dairy products. In addition, the data and assumptions made by Mr. Yale for this analysis were found to contain numerous errors as the witness from Leprino Foods described in Exhibit 69, Pages 2503-9 as follows:

"Comments on Dairy Producers of New Mexico Impact Estimates

In attempting to justify his various Proposals, on behalf of the Dairy Producers of New Mexico, et al., Mr. Yale presented analyses that he contended showed that the changes in the Class III and IV price formulas made since 2001 reduced producer income by, on average, \$13,245 per

producer. While I have already pointed out the various flaws in Mr. Yale's Proposals, I feel it important also to show the errors in Mr. Yale's economic analyses.

Mr. Yale's analyses incorporate two major errors. The first is in the calculation of the baseline Class III price using the 2001 formula. The second is in the calculation of the pool value at test.

The error in the Class III formula resides in the protein price calculation under the "changed" column. Specifically, Mr. Yale's calculation on table KK of Exhibit 33 provides credit for only 90% of the Class III fat price. However, the 2001 formula, as it existed and is represented on table D in Exhibit 33, credited the entire Class III fat price. The impact of the error in Mr. Yale's formula is that the protein price is overstated by \$0.1718 per pound protein on table KK of Exhibit 33, and the Class III price at class is overstated by \$0.51 per hundredweight milk in the baseline period.

An additional error was incorporated into Mr. Yale's analysis through his incorrect methodology to calculate the Class prices at test. Although I have not been able to replicate his calculations, it is clear from looking at the formulas that he lays out (Exhibit 32, page 12), that his calculation erroneously multiplies the protein value (in the case of Class III) by the skim percentage in Class III and the SNF value (in Class IV) by the skim percentage in Class IV. Presumably, the 96.5% multiplier was borrowed by Mr. Yale from the methodology used to calculate the 3.5% standardized price based upon the price of 100 pounds of skim. In this situation, the 96.5% factor is used to reflect that 100 pounds of milk with 3.5 pounds fat can only contain 96.5 pounds of skim. But the calculation at test should be based upon the actual pounds of each component multiplied by the respective component price for that component. That is how minimum milk prices paid into the pool are actually established. Mr. Yale's failure to use the actual Class prices means that his analysis of minimum milk prices only reflects 96.31% of the Class III protein value at test, and 94.79% of the Class IV SNF at test.

I have recalculated table KK using the same methodology as was used by Mr. Yale with the exception of correcting the errors noted. I have also added some detail for clarity. My analysis shows that Mr. Yale's conclusion that producers had lost \$0.56 of their revenue stream through regulated milk price formula changes since 2001 is grossly overstated; the impact of the regulatory changes using his methodology with the correct price formulas is a reduction of \$0.17 per hundredweight milk. This analysis is attached as Addendum C.

Additionally, I have observed that because of the complexity of changes that have occurred in the Class III formula, the impact of those changes

varies dramatically by market condition. For example, replicating the same analysis using 2004 market prices shows that producers would have received more in 2004 under the current price formulas than they did under the 2001 formulas. That analysis is attached as Addendum D.

The same errors in the methodology to calculate milk prices at test and estimate the blend impact are made in Tables LL, OO, AAA, BBB, EEE, TTT, VVV, WWW, ZZZ, AAAA, DDDD, in Exhibit 33.

Comments on Dairy Producers of New Mexico contention that producers are "paying" for higher yields at plants through the make allowance.

Mr. Yale erroneously assumes that the yield assumed in the Class III formula is impacting the underlying cost studies that are considered in setting the make allowances (Exhibit 32, page 29). He implies that the total plant costs determined in the cost surveys are divided by the yield factors in the formulas, which he believes under-represent actual yields. Taken in combination, dividing plant costs by a low yield, he contends, results in a higher make allowance.

In fact, the yields used in the Class III formula are not used to translate total plant costs into costs per pound. Rather, the actual yields of the plants are used in that process. Therefore, Mr. Yale's argument is without merit" (Taylor, Tr. 2503-9).

Indeed, Mr. Yale essentially admitted the errors in his analysis during cross examination admitting that the basis for tables OO, BBB, EEE, TTT, WWW, ZZZ, AAAA, DDDD and EEEE were the numbers that he calculated on table KK. He admitted that the numbers that he calculated in KK were incorrect (Yale, 2184-2209).

II. USDA must adopt values for the make allowances, yield factors and wholesale dairy product prices in the product price formulas which represent actual industry data, encompass the entire industry, from the most recent time period available, all the while in keeping with the fact that the product price formulas are used to determine minimum regulated farm milk prices.

Yonkers noted the critical need for a make allowance that covers the total costs of turning raw milk into a finished dairy product, because the make allowance provides the only source of funds available to the processor. Without an adequate level of make allowance, a manufacturing plant could not continue to operate, as it would have insufficient funds available to pay the vital costs necessary for operating the plant. In addition, Yonkers noted that exactly the same problems are created if USDA uses incorrect data or assumptions in determining the product price paid for the finished products, or the yields that a manufacturer is assumed to achieve in turning raw milk into a finished product (Tr. 2569).

Proposal 1: USDA should make changes to the make allowances in all the Class III and Class IV product price formulas to account for changes in costs of processing dairy products.

USDA should update the current make allowances using the most recently available data on costs of processing dairy products presented during the hearing. In the Interim Final Rule on make allowances implemented February 1, 2007, USDA combined data from two sources, CDFA and the CPDMP. In general, IDFA supports the methodology used in the Interim Final Rule to determine the make allowances.

Both sources have provided updated data on this hearing record (Exhibit 10 from CDFA and Exhibit 72 from CPDMP).

As USDA repeatedly noted in the recently implemented Tentative Decision resulting from the January and September make allowance hearings (Tentative Decision), the CDFA data on the costs of processing represents an audited survey of manufacturing plants in that state. The CDFA survey data results have been endorsed and utilized by USDA since 2001 to set make allowances. There is therefore no reason not to incorporate the latest CDFA data in setting make allowances, and IDFA strongly urges that USDA do so for all products covered by these surveys.

However, in the Tentative Decision, USDA only used the CPDMP data in setting the whey make allowance. IDFA testified at this hearing that, in the Tentative Decision, "USDA stated, *'In the CDFA survey, dry whey drying costs may be unreasonably high because California has only three dry whey processing plants where high cost plants appear to skew the costs dramatically.'*" 71 Fed. Reg. Page 67485 (Yonkers, Tr. 947-948).

However, no data was presented at either that hearing or this hearing that could allow USDA to reach such a conclusion. Exhibit 10 contains no individual plant data and therefore no determination can be made about the distribution of costs of processing among the three plants in the CDFA survey. In fact, data that is available points to the opposite conclusion than that reached by USDA. USDA NASS reported that there were only 5 plants in California producing dry whey in 2004, and the three plants (60% of all the dry whey plants in California) in the CDFA cost survey represented nearly 79% of the USDA NASS reported dry whey production in that state that year. Thus, the two plants not in the survey must, by definition, have far less volume processed, on average, than the three plants that were included in the CDFA survey. Given the record evidence as to the positive effect of economies of scale on processing costs per hundredweight with respect to all dairy products, these two excluded plants in all likelihood had materially higher costs per hundredweight than the three surveyed plants. The CDFA data, if

anything, under-reports the average costs of processing dry whey for all five plants in that state (Yonkers, Tr. 948-949).

In addition, a comparison of the average volume processed per dry whey plant among NASS, CPDMP, and CDFA reveals that it is the CPDMP data that is less comparable to the national average plant size than the CDFA data, not the other way around. The average dry whey plant in the CPDMP survey processed over 77% more volume than the NASS national average, while the average dry whey plant in the CDFA survey only processed 16% more. Therefore, the CDFA survey is more representative of the U.S. average than the CPDMP survey with respect to the costs of processing dry whey (Yonkers, Tr. 949).

USDA should therefore include both the CDFA and CPDMP survey weighted average data in determining the dry whey make allowance.

However, USDA must correct the CPDMP data with respect to cheese to account for the sampling toward very large cheddar cheese plants resulting from CPDMP's use of an unbalanced stratified sampling procedure for that product only. As USDA noted in the Tentative Decision, *"The CPDMP study sample of cheese plants is not a random sample. It is a stratified random sample where randomness only applies to strata (size related groupings) of the surveyed plants."* And later, *"This sample design was intentionally biased to over-represent large, lower cost plants. The record shows that large plant costs otherwise would have been seriously underrepresented if the survey had relied on a truly random selection of cheese plants."* 71 Fed. Reg. Page 67485. (Yonkers, Tr. 954).

Given these observations, which are entirely accurate, USDA must correct for this intentional bias in the CPDMP survey before applying the survey results to set make allowances for all Class III plants in the federal order system. By using a stratified sample, Dr. Stephenson over-sampled larger plants. Given that larger plants are, other things equal, more efficient, this meant that Dr. Stephenson was over-sampling plants with relatively low costs of processing. If one does not adjust for that fact, the survey results will significantly understate the costs of processing among cheese plants as a whole. Thus, if one does not adjust for that fact, one will set a make allowance that is too low.

Having used a stratified sampling technique, one obviously must adjust for that stratification when using the survey results in determining average costs of processing by all cheese plants. USDA in its Tentative Decision noted that, *"Even if the methodology used to calculate the estimated make allowance of \$0.2028 per pound of cheese was statistically acceptable, the Department would not use it as the new make allowance for cheese the use of different methodologies to establish make allowances for different products likely would result in unintended consequences that could distort the competitive situation between cheese plants and butter-NFDM plants"* 71 Fed. Reg. Page 67486 (Yonkers, Tr. 956).

This comment misperceives the situation. The "use of different methodologies" did not relate to CPDMP's calculation of a population weighted average for cheese but not for the other products, but rather referred to the use of a sampling technique for cheese that was different than the sampling methodology employed for the other products. The cheese costs of processing survey was developed using a stratified random sample, while the surveys for the other products used a non-stratified random sample. There was thus an inherent need to correct for stratification with respect to the cheese survey, and inherently no need to do so for the other surveys (Yonkers, Tr. 957).

Having adopted a stratified sample technique for cheese (a methodology different than that employed for the other three products), USDA cannot fail to take the necessary next step and correct for the stratification when applying the results to cheese plants as a whole as a necessary result of having decided to use a different sampling methodology in the first place.

Indeed, this was the testimony of Dr. Stephenson from Cornell University. When asked, "As we discussed a few minutes ago, you had testified that in September 2006 that you saw it appropriate to make an adjustment for the fact that you had performed a stratified sample for cheese; correct?" Dr. Stephenson replied, "Yes, that's correct" (Tr. 2781). When asked further, "Once again, making an adjustment that you engaged in stratification remains from an economist's perspective the best way to handle the cheddar cheese data; is that right?" Dr. Stephenson agreed by answering, "I think that it is" (Tr. 2783).

There was no *a priori* statistical reason to make such a correction to the sample results for dry whey, butter and nonfat dry milk because a stratified sample had not been used. The fact that, as USDA notes, *"CPDMP did not have similar population data available to do comparable regression analyses for butter, NFDM and dry whey,"* thus becomes irrelevant. USDA observes that:

"It is possible that if the regression methodology could be used for butter, NFDM and dry whey that estimated average make allowances for those products also would be higher than the weighted average costs from the plant samples." 71 Fed. Reg. Page 67486-7.

As noted by Yonkers, "This might be true, but we do not know whether this is true, and do not need to know because a stratified sample was not used for these other products. The reasons why such a stratified sample was used for cheese, and properly so, were recognized by USDA and are discussed above. Cheese plants cannot be saddled with a make allowance that is too low merely due to speculation as to what the make allowance might be for other products had alternative survey methodologies been utilized for them" (Yonkers, Tr. 958).

Consistent with the Tentative Decision, USDA should use the NASS data for dairy product production in California and the rest of the U.S. in weighting the cost of

processing data from CDFA and CPDMP in determining the make allowance. During the hearing, official notice was taken of the most recent Dairy Products Annual Summary (April 27, 2007) in which that data is published.

Dr. Stephenson presented data on costs of processing in Exhibit 72 which updated data he presented at a previous hearing in September (Exhibit 75). The most important statement made by Dr. Stephenson was that "In summary, in the previous study, the bulk of plant-month observations came during the 12-month time period of July 2004 through June of 2005. This time, calendar year 2006 was where I had the majority of the observations. Over that year and a half, plants have continued to observe increased costs of processing. These are most pronounced in the same-plant comparisons for cheese, butter, non-fat dry milk and less so for whey processing" (Tr. 2547-48).

However, this is not evident from a comparison of the sample averages for the costs of processing cheddar cheese between Exhibit 75 (study results presented in September 2006) and Exhibit 72 (study results presented in July 2007). But, as Dr. Stephenson indicated under cross examination by the representative from NMPF, this was due to a large change in the average size of plant in the survey results between the two studies:

"Q. Obviously there has been a big change in the plant sizes from your participating sample in the average plant size; is that correct?

A. That's correct, in the reported numbers here, that's right." (Tr. 2785)

In fact, Dr. Stephenson notes that it would not be appropriate to compare the sample weighted average costs of processing between the September 2006 and July 2007 studies in drawing any conclusions regarding how costs of processing have changed between the two periods studied:

Q. Is it reasonable to conclude that the half cent decline in weighted average as shown in Exhibit 72 as presented today is in all likelihood a reflection of the fact that the sample is now more heavily weighted toward larger plants as opposed to their actually having been a decline in processing costs?

A. I had hoped that I made that clear in my testimony but I'm glad to clarify that, yes, I think that's the case. (Tr. 2780)

Dr. Stephenson explained this in detail under cross examination. In the September 2006 study, he attempted to survey 20 cheese plants. He did so using a stratified random sampling procedure, whereby he randomly chose 5 plants to survey from the largest 10 percent by annual volume of cheddar cheese produced of all plants eligible to be surveyed, and the remaining 15 survey plants were randomly selected from the remaining 90 percent of plants eligible to be surveyed. Dr. Stephenson noted that the same plants were surveyed for the current study, the results of which were presented in testimony at this hearing. (Tr. 2536).

Dr. Stephenson then provided details regarding the strata of plants participating in each study (Tr. 2769-2775), which are summarized as follows:

	September 2006	July 2007
Participants from top 10 percent of plants by volume	2	4
Participants from remaining 90 percent of plants by volume	14	7
Total plants in survey	16	11

As this table shows, only 12.5 percent of plants in the September 2006 study were among the largest plants in the country, but in the July 2007 study results 36.4 percent were from the largest plants in the country. Remember, Dr. Stephenson stratified his sample to insure that large plants were over-represented in the survey, an outcome he achieved in the July 2007 study. This is the very reason USDA must not use the July weighted average costs of processing cheddar cheese as reported by Dr. Stephenson without correcting for this intentional sampling bias.

In Exhibit 75 detailing the September 2006 study results, Dr. Stephenson provided that correction, reporting a population-adjusted weighted average using the sample results. In this hearing, Dr. Stephenson did not present such a correction, but did note that, as a researcher, he considered that it would be appropriate to do so:

"Q. Is it still your view that that kind of refitting produces the best number?

A. I think that it probably does because the last time we had an over sampling of smaller plant in the survey. This time I think we have an oversampling of larger plants in the survey. If you really want to get something representative of the population, then you need to make a statistical estimation of that." (Tr. 2779)

However, Dr. Stephenson did provide testimony on what he considered the appropriate methodology to employ with the two studies in order to determine the change in costs of processing for cheddar cheese between the September 2006 and July 2007 studies. In Exhibit 72, he pointed out:

"Table 1 also shows the weighted average costs from the project offered in the previous testimony. It may be noted that the total processing costs reported actually declined from the previous summary. However, it should also be noted that there are three large plants that are included in the current summary that were not included in the last report because their data was submitted too late for inclusion. Please note that the average annual pounds of cheese processed nearly doubled from the previous report. There are eight plants which participated in both projects and allow a plant-

by-plant comparison of the costs from the previous report and this one. Comparing the same plants shows that processing costs have actually increased about 1.7 cents per pound since the last study" (Tr. 2542-3).

Dr. Stephenson noted this comparison, and not a comparison of the reported sample weighted average results for the September 2006 and July 2007 studies, would be the most appropriate in describing how costs have changed between the time periods of the two studies:

Q. Is it fair to say that the most reasonable conclusion to draw from your July 2007 report is that the costs of processing for cheddar cheese plants has increased by 1.7 cents per pound?

A. I think that that is the strongest conclusion that can be drawn from the data. We do have more observations now at the large end of the scale and I think that makes me feel better, the full length of plant observations that we had. However, looking at -- if the question is how have costs changed for plants over this roughly year and a half time period, I think that 1.7 cents a pound is approximately the correct number. (Tr. 2781)

Therefore, based on the undisputed testimony of Dr. Stephenson, USDA did not properly account for the sampling bias introduced by using a stratified random sampling approach when it used the sample weighted average of the costs of processing from his September 2006 study in the Tentative Decision implemented in February 2007. As a result of this hearing, USDA should use the population adjusted weighted average costs of processing cheddar cheese from the September 2006 study (Exhibit 75) and the increase of 1.7 cents per pound of cheddar cheese increase in costs of processing for the same 8 plants included in both the September 2006 and July 2007 studies in determining the appropriate make allowance to implement Proposal 1.

The table below indicates how USDA should use the testimony and data presented at this hearing to adjust the make allowances.

Tentative Decision	Butter	Nonfat Powder	Cheese	Dry Whey
Total 2005 US NASS Volumes	1,347,227	1,186,104	3,812,950	963,716
CDFA weighted average costs	0.1368	0.1730	0.1769	NA
CA NASS volumes	407,872	506,452	854,704	119,215
CA share of NASS	0.3027	0.43	0.22	0.12
CPDMP sample weighted average costs	0.1108	0.1423	0.1638	0.1941
Non-CA NASS volumes	939,355	679,652	2,958,246	844,501
Non-CA share of NASS	0.6973	0.57	0.78	0.88
CDFA and CPDMP weighted by NASS	0.1187	0.1555	0.1667	0.1941
Add marketing costs	0.0015	0.0015	0.0015	0.0015
Tentative decision make allowances	0.1202	0.1570	0.1682	0.1956

Using Stephenson testimony on same plant changes, with cheddar cheese based on the September 2006 population-adjusted weighted average	Butter	Nonfat Powder	Cheese	Dry Whey
Total 2006 US NASS Volumes	1,448,482	1,224,072	3,912,606	1,049,139
CDFA weighted average costs	0.1408	0.1872	0.1914	0.2851
CA NASS volumes	448,592	613,240	819,113	107,062
CA share of NASS	0.3097	0.5010	0.2094	0.1020
CPDMP July 2007 same plant comparison	0.1846	0.1662	0.2198	0.1976
Non-CA NASS volumes	999,890	610,832	3,093,493	942,077
Non-CA share of NASS	0.6903	0.4990	0.7906	0.8980
CDFA and CPDMP weighted by NASS	0.1710	0.1767	0.2139	0.2065
Add marketing costs	0.0015	0.0015	0.0015	0.0015
IDFA comment make allowances	0.1725	0.1782	0.2154	0.2080

In summary, USDA should set the make allowances used in the product price formulas as follows;

- For butter, a make allowance of no lower than \$0.1846 (18.46 cents) per pound of butter;
- For nonfat dry powder, a make allowance of no lower than \$0.1662 (16.62 cents) per pound on nonfat dry powder;
- For cheddar cheese, a make allowance of no lower than \$0.2198 (21.98 cents) per pound, and;
- For dry whey, a make allowance of no lower than \$0.1976 (19.76 cents) per pound.

Proposal 9: USDA should adopt changes to the Class III product price formulas to account for the incorrect accounting for the value and volume of whey cream in the current formulas.

Whey Cream Value

As noted by the witness from Leprino Foods, the current Class III product price formula for protein captures the cheese yield value of butterfat in the protein formula factor (Taylor, Tr. 2449). Including the cheese value of fat in the protein price formula in addition to charging for the fat separately in the butterfat price formula would result in valuing the same butterfat twice. Therefore, the protein price formula also gives credit for a portion of the price paid for the butterfat component.

This is accomplished through the subtraction of “(0.9 x butterfat price)” in the protein equation. The “0.9” factor was adopted because the cheese yield factor of 1.572 assumes, IDFA believes correctly, that 90% of the fat in the milk in the vat is captured in the cheese. However, by subtracting 90% of the fat component price, the formula leaves 10% of the fat valued at the levels of the fat component price. That is to say, the protein price formula leaves 10% of the fat (0.35 pounds at standard test priced as if it was used by a manufacturer to produce grade AA butter price (Taylor, Tr. 2453).

Therefore, farm milk with 3.5 percent butterfat will have 0.35 pounds of that butterfat (10 percent) that is valued at the Class III butterfat price by the Class III price formula (Taylor, Tr. 2454). In addition, the protein price formula also assumes that all the 0.35 lbs of butterfat was delivered to and recovered from the cheese vat after being subjected to all of the fermentation and mechanical processes associated with cheddar cheese production.

Taylor noted that assuming that butterfat, once subjected to the cheese making process, can be used to produce grade AA butter is inconsistent with USDA’s own quality standards for grade AA butter.

“The Department’s Agricultural Marketing Service Dairy Division publication, “United States Standards for Grades of Butter”, describes the specifications for the USDA Grade AA butter on page 2 as follows:

(a) U.S. Grade AA. U.S. Grade AA butter conforms to the following: Possesses a fine and highly pleasing butter flavor. May possess a slight feed and a definite cooked flavor... For detailed specifications and classification of flavor characteristics see Table I, and for body, color, and salt characteristics and disratings see Table II.

The same page goes on to describe U.S. Grade B butter as follows:

(c) U.S. Grade B. U.S. Grade B butter conforms to the following: Possesses a fairly pleasing butter flavor. May possess any of the following flavors to a slight degree: Malty, musty, neutralizer, scorched, utensil, weed, and whey... For detailed specifications and classification of flavor characteristics see Table I, and for body, color, and salt characteristics and disratings see Table II.

The table referred to in these definitions, Table I on page 3 of the same USDA publication, specifically assigns butter with a whey flavor to Grade B status. Whey flavor is inherent to whey cream. Therefore, butter produced from whey cream would be assigned a Grade B rating” (Taylor, Tr. 2457).

This evidence clearly demonstrates the impropriety of valuing the fat in whey cream at the Grade AA butter price. Some witnesses – none of whom actually make cheddar cheese – tried to defend that approach by arguing that the whey cream is re-introduced into the manufacturing process and used to make cheddar cheese. But numerous witnesses from companies which manufacture cheddar cheese testified unequivocally that they do not do so. Agrimark (Tr. 857), Twin County Dairy (Tr. 1411), Foremost Farms (Tr. 1542), Davisco (Tr. 1570), Great Lakes Cheese (Tr. 1919), and Land O’ Lakes (Tr. 2115) all testified that they do not recycle whey cream into their cheddar. Kraft, the largest retail marketer of cheese in the US, testified that it does not allow its suppliers to do so with respect to over 85% of the cheddar cheese it purchases (Tr. 1102). Mr. Sommer of the University of Wisconsin's Center for Dairy Research testified that Alto Dairy did not do so and that it was an unwise practice for cheddar manufacturers to attempt to do so (Tr. 2350).

The witness from Leprino summarized this testimony as follows: "The recycling of whey cream in cheddar production is limited by quality concerns. Additionally, the risk of a buildup of bacteriophage is greatly increased with the recycling of whey cream. Bacteriophage are viruses that attack the bacteria cultures that are used to set the cheese curds. The buildup of bacteriophage can lead to poor vat sets and production of off-grade cheese which commands a considerably lower price than is reflected by the NASS survey” (Taylor, Tr. 2458).

For all of these reasons cheddar makers typically must sell whey cream in bulk truckloads. However, several witnesses noted, very few buyers of whey cream exist in the market today (Wellington, Tr. 382-3; Jennings, Tr. 1961; Taylor, Tr. 2950). The witness from Leprino Foods noted, "After canvassing cheese makers from throughout the country, I have been able to identify only six companies that represent a total of eight plant locations that purchase whey cream in the country. These six buyers are Agrimark (West Springfield, MA), Beaver Meadows (DuBois, PA), Grassland (Greenwood, WI; West Point, NE; Hyrum, UT), DFA (Winthrop, MN), Alcam (Richland Center, WI) and Madison Farms Butter (St. Louis, MO). In addition to the reduced competition due to the limited number of players, the lack of local outlets drives up the cost of transporting the whey cream to market. This is particularly true in the east and the west. The cost of transport is either borne by the seller explicitly or indirectly through a lower purchase price" (Taylor, Tr. 2458).

The testimony by cheddar makers (Brown, Tr. 2553-6; Jennings, Tr. 1918-21, ex: 52; Wellington, Tr. 854-5) shows that the sales price for previously contracted whey cream supplies is 94.4% of the grade AA butter price in the Pacific Northwest (Brown, 220-1) and flat (100.2%) grade AA butter price in the Northeast. Furthermore, pricing on spot loads is typically considerably less, and in addition typical market terms of trade for whey cream sales only value the butterfat in whey cream: "The pricing in a whey cream transaction is applied only to the pounds of fat in the whey cream; the skim portion of the whey cream is not valued (Taylor, Tr. 2460).

Even ignoring the fact that the cheese maker does not receive payment for the protein and other solids in the whey cream for the moment, even a flat grade AA market revenue stream falls short of the cheese maker's cost based upon the regulated Class III fat price" (Taylor, Tr. 2460). This is because the formula prices the fat in whey cream at the Grade AA price minus the 12.02 cent butter make allowance times 1.2 (Taylor, Tr. 2460).

Taylor calculates that the formula results in "a 12.5 cent and a 20.4-cent per pound shortfall in the revenue cheddar cheese manufacturers have based upon the fat component cost established by the existing Class III price formulas. In other words, the regulated minimum price under the current formula is based upon the assumption that processors are receiving in the marketplace 12.5 cents (Northeast) and 20.4 cents (Pacific Northwest) more than they really are, with respect to the fat component of the whey cream" (Taylor, Tr. 2460).

Taylor also pointed out that these shortfalls do "not even reflect that the protein and other solids in the whey cream are not generating any explicit revenue whatsoever, given that the price paid for whey cream is based entirely upon its fat content" (Tr. 2463).

The hearing record is clear that the whey fat recovered as whey cream is overvalued in the current Class III price formulas, which falsely value that fat as if it had the same value as the fat in Grade AA butter. Therefore, USDA must make adjustments to the relevant factors in the protein price formula to reflect that lower value.

Whey Cream Volume

In addition to overvaluing the whey fat that is recovered in the form of whey cream, the existing Class III formula overstates the volume of fat that can be recovered as whey cream from cheddar production. The 0.35 pound assumption in the current formula ignores both the fat that is captured in dry whey rather than in whey cream, and the fat that is lost in the salt whey, sludge and cleaning solutions (Taylor, Tr. 2465).

As noted by the witness from Leprino Foods, butterfat pounds measured in farm milk are reduced by farm to plant losses, which are appropriately reflected in the current Class III formula. They are then reduced by the butterfat captured in the cheddar making process, which is also already and appropriately reflected in the current Class III formula (Taylor, Tr. 2467-2468).

However, numerous witnesses during the hearing noted that additional butterfat in the whey stream is not properly accounted for in the current Class III price formula, because it is assumed that all of that butterfat ends up in whey cream, when it is not (Carlson, Tr. 2408; Latta, Tr. 2415; Schad, Tr. 2110-1).

In summary, butterfat in the whey stream which is not properly accounted for in the current Class III price formula includes the butterfat that is incorporated in dry whey, which is 1.25% of the dry whey volume (Taylor, Tr. 2468), as well as butterfat losses due to the butterfat associated with the skim portion of the salt whey that is disposed of due to salinity issues (Taylor, Tr. 2468). The total amount of butterfat recoverable in whey cream by a manufacturer is 0.2715 pounds out of the original 3.5 pounds of butterfat as measured at the farm, which equates to only 7.8% of the butterfat in that farm milk, not the 10% assumed by the current formulas (Taylor, Tr. 2468).

Correcting The Protein Price Formula

Proposal 9 calls for the correction of the whey cream factor to account for both the true volume of the fat recovered in the whey cream and the true value of that whey cream. As noted above, the maximum recoverable butterfat in whey cream, assuming a 90% vat butterfat capture rate in cheddar cheese is 7.8% of the original butterfat in farm milk. The current protein price formula factor of 0.9 assumes that 10% of the butterfat is recovered as whey cream, a serious overstatement of the volume of butterfat in that whey cream for which a manufacturer receives market value. USDA must change the 0.9 factor to 0.922, to reflect this reality.

However, this change alone does not correct for the fact that the current Class III price formula greatly overstates the actual market value of whey cream. The protein price formula must include an adjustment to reflect the true difference between whey cream and sweet cream values. USDA should adopt the methodology outlined by the witness from AgriMark as stated in Proposal 10 in the hearing notice, but the amount of the adjustment should reflect the true difference in value between whey cream and sweet cream as testified to by several witnesses at the hearing.

Specifically, the analysis and discussion under the heading above “Whey Cream Value” indicates that the whey butterfat component that is recovered in whey cream is overvalued in the current Class III price formula by 12.5 in the Northeast and 20.4 cents per pound in the Pacific Northwest. Given that we have uniform Class III pricing across the country, USDA should adjust the protein price formula to accommodate the greatest shortfall in market values from the hearing record, which is the 20.4 cents per pound of butterfat shortfall reported by the witness from the Northwest Dairy Association in the Pacific-Northwest. Applying the 20.4 cents per pound to the remaining volume of butterfat in the whey stream of 0.2715 pounds (7.8% of butterfat) equates to a reduction of 5.5 cents per hundredweight of farm milk (Taylor, Tr. 2470).

As noted by witnesses from AgriMark and Leprino Foods, this adjustment should be accounted for in the butterfat value correction portion of the protein price formula. Given that 2.9915 pounds of protein are assumed in a hundredweight of farm milk with 3.5% butterfat, and the fat correction portion of the protein price formula is multiplied by 1.17, the appropriate adjustment to the butterfat portion of the protein price formula is a reduction of 1.6 cents. The \$0.016 multiplied by 1.17 and 2.9915 equates to the 5.5 cents per hundredweight that needs to be accounted for due the difference in value for butterfat in whey cream versus sweet cream (Taylor, Tr. 2471).

As a result of the unequivocal testimony and exhibits presented at the hearing, USDA should change the protein price formula as follows, where the changes from the current protein price formula are bolded and underlined:

$1.383 \times (\text{NASS Cheddar cheese price} - \$0.1682) + [1.572 \times (\text{NASS Cheddar cheese price} - \$0.1682) - (\underline{\mathbf{0.922}} \times \text{Fat Component Price}) - \underline{\mathbf{\$0.016}}] \times 1.17$

III. Proposal 12: USDA should eliminate the 3 cents that is currently added to the barrel price before calculating the weighted average NASS cheese price used in the Class III formula.

Three cents is currently added to the barrel price before calculating the weighted average NASS cheese price used in the Class III formula. At the time this three cent adjustment was adopted as part of the Final Rule under Federal Order Reform, USDA noted: “Since the make allowance of \$0.1702 is for block cheese,

the barrel cheese price must be adjusted to account for the difference in cost for making block versus barrel cheese. The three cents that is added to the barrel cheese price is generally considered to be the industry standard cost difference between processing barrel cheese and processing block cheese.” Fed. Reg. Vol. 64 No. 63 Page 16098 (Taylor, Tr. 2474).

Since that time, two significant developments have occurred. First, the manufacturing cost data presented by Dr. Mark Stephenson of Cornell University at both the September 2006 make allowance hearing (which was used to set the make allowances that went into effect February 1, 2007) and this hearing included data from plants which manufactured both blocks and barrels. (Stephenson, Tr. 2789-90). Therefore, the current make allowances reflect the weighted average processing cost for plants which make either 40 pound blocks and 500 pound barrels or both. To make an additional three cent adjustment to reflect the purported processing cost difference between blocks and barrels is double counting (Taylor, Tr. 2475). (While it is true that CDFA cost data was also used to set the current federal order make allowances, and does not include barrel plants costs, Dr. Stephenson’s cost data, which does include both block and barrel plants, covered 78% of the total production volume, and given that relative weight in establishing the make allowances.)

Second, at the time it was first adopted in the formulas, the three-cent addition was not based upon a study of actual cost differences between blocks and barrels. Rather, it was based upon what was “generally considered to be the industry standard cost difference between processing barrel cheese and processing block cheese” as noted above (Taylor, Tr. 2475). And the three-cent rule of thumb was in fact accepted by the industry as the cost difference because it had been manifested in the marketplace as the long-term difference in prices between 40 pound blocks, and 500 pound barrels **at 39% moisture**.

However, as the witness from Leprino Foods noted, subsequent to the implementation of the three cent adjustment under Federal Order Reform, USDA adopted in the Tentative Rule implemented January 2001 a change in the pricing reference used for barrel cheese from the 39% moisture price that set the framework for the three cent adjustment to a 38% moisture adjusted price. This change in the moisture level at which barrel prices are quoted has increased the barrel cheese price by 2.2 cents per pound during the last five years. Thus, the three-cent adjustment, and the adjustment of the barrel price to a 38% price reference, both capture the same facet of the relationship between the price of blocks and barrels, and it is duplicative and double counting for the formulas to reflect both, as they currently do (Taylor, Tr. 2476).

And finally, evidence has been presented at this hearing by Jon Davis with respect to block and barrel production costs in a Davisco plant that has comparable capacity in both forms, with capital investments to both lines made in a

comparable timeframe, which showed no difference in cost between the production of cheddar blocks and barrels (Davis, Tr. 1562).

For all of these reasons, USDA should eliminate the three cent adjustment to the barrel price when determining the cheddar cheese wholesale price o used in the protein price formula.

IV. The hearing record does not support any other changes to the Class III and Class IV price formulas.

A. Proposal 2: USDA should not modify federal order regulations to permit changes to make allowances without holding a hearing to consider any change.

While the concept of conducting an annual costs of processing survey could provide important information, USDA should not use such data to automatic adjust make allowances without holding a hearing. Industry should have the ability to comment on the use of such data inputs

B. Proposal 3: USDA should not return the make allowances to the levels prior to implementation of the tentative rule on February 1, 2007.

As discussed above with respect to the reasons why Proposal 1 should be adopted, the hearing record is filled with testimony and actual industry data supporting the fact that costs of processing have increased since the make allowance levels found in Proposal 3 were adopted by USDA. Proponents of Proposal 3 presented no actual data on costs of processing, **not even from one manufacturing plant**. There is simply no basis for USDS to reduce make allowances, as Proposal 3 suggests.

C. Proposals 4 and 5 were not supported by any testimony or other evidence at the hearing and they therefore should be rejected.

D. Proposals 6, 7, 8 (Dairy Producers of New Mexico yield Proposals): USDA should not adopt any changes to yield factors based on these Proposals.

Proposals 6, 7 and 8 would all increase the yield factors in the Class III and Class IV product price formulas, based upon assumptions that do not comport with either minimum regulated pricing or manufacturing realities. The only witness to appear at this hearing in support of these Proposals has no qualifications in operating and managing actual plants which manufacture the products used in the product price formulas.

In addition, the proponents based these three Proposals on the following erroneous assumptions:

- That structural changes in the farm sector have eliminated the need to

- accommodate farm-to-plant losses when determining yields;
- It is an industry standard that 94% of the butterfat measured in milk at the farm is captured in the finished cheddar cheese; and,
- That casein represents 83.25% of true protein in farm milk.

The hearing evidence demonstrates that all three assumptions are wrong.

The hearing record does not support the elimination of the farm to plant shrink allowance in the current product price formulas

Eliminating the farm to plant shrink allowance is in direct conflict with the three basic facts. They are (1) the Orders set minimum prices for milk as measured at the farm, (2) shrink occurs between the farm and delivery to the milk silos at the manufacturing plants, and (3) the VanSlyke yield formula used as the basis for setting the cheese yield factors is designed to estimate the cheddar yield based upon components present in a cheese vat, not in farm milk (Taylor, 2480). In other words, the VanSlyke formula does not account for the losses of components that occur in the collection, transport, and delivery of milk between the farm and plant. In the current product price formulas, USDA has properly accounted for this fact by adjustments in yields at the plant to account for this farm to plant loss of milk and component volumes.

The losses of milk volume and components that occur between the farm bulk tank and the plant have been well documented in this hearing. MMPA testified that their losses average around 0.3% (Galarneau, Tr. 469). Land O' Lakes experienced 0.343 farm to plant loss by volume and 0.511 farm to plant loss on the fat component in 2006 (Schad, Tr. 2155). While noting that the company applies significant resources to managing farm to plant losses, the witness from Leprino Foods testified that they still have plants that persistently experience losses in the realm of 0.25%, and that several of their plants experience average annual fat losses exceeding the 0.015 pounds per hundredweight milk farm to plant loss that is assumed in the existing product price formulas (Taylor, Tr. 2481).

Proponents contend that changes in farm structure, and specifically, the emergence of larger farms, have remedied the historic farm to plant losses that necessitated the farm to plant loss allowance that is currently embodied in the Class III and IV yield assumptions. However, several witnesses pointed out that many regions under federal order regulation have many small dairy farms which require many farm stops to fill a milk tanker (Taylor, Tr. 241-2; Schad, Tr. 2117) (Yale, Tr. 2235) The potential error in measurements, and the losses that are inherent in transferring the milk from the farm bulk tank to the truck, are all magnified by these multiple stops. It is not appropriate for USDA to adopt Proposals that are inconsistent with these marketplace realities.

Furthermore, even in regions of the country where large dairy farms are more common, larger farms can still generate meaningful farm to plant losses. Although

some large dairies use certified scales for their milk, many do not, even if they are shipping truckload quantities. Some of these dairies have bulk tank capacity that exceeds the capacity of a tank truck. In these cases, the driver measures the milk by site tube or stick both before and after filling the truck. The addition of another subjective measurement and the math that is associated with it creates another opportunity for error (Taylor, Tr. 2482). As Mr. Yale noted (Tr. 1287), these differences may be generated by poor agitation prior to sampling at the farm; however, again these are the realities of moving milk from farms to plants. The challenge of getting a bulk truck driver to wait the time required to get the farm tank adequately agitated prior to sampling is no less with a large farm pick-up than a small farm pick-up.

Farm to plant losses remain a significant issue that, even when aggressively managed, exist in the marketplace today. USDA was correct in acknowledging these losses in the existing yield factors, and should not adopt Proposals that would eliminate them.

The hearing record does not support increasing the butterfat retention factor from 90% to 94% in the protein price formula.

The proponents of increasing the fat capture factor from 90 to 94% have provided no supporting evidence demonstrating that cheese plants in fact capture 94% of the fat in milk in the cheese. Rather, the proponents provided hypothetical examples as to what the monetary impacts would be if a plant were to be able to achieve 94% fat capture. Such hypothetical examples do not prove that their underlying assumptions are realistic or achievable.

Mr. Yale, in an effort to support the Proposals to increase the yields in the Class III formula, attempts to estimate the yields achieved in California based upon published CDFA cost study data (Exhibit 32, page 37). But as noted by the witness from Leprino Foods, Mr. Yale's analysis is riddled with erroneous assumptions and errors. Mr. Yale assumed that the standard of identity for cheddar cheese restricts inputs to milk, cream or skim milk; however, FDA has issued an advisory letter allowing liquid ultrafiltered milk ("UF") to be used in cheddar cheese production. CDFA hearing testimony documented the actual use of UF milk in cheddar plants in California. Because the protein in the UF milk would typically be concentrated to three times the concentration in raw milk but the lactose remains at roughly the level of raw milk, the protein to SNF ratio in UF milk is very different than that in raw milk. Without knowing the actual protein composition in the vat, no conclusions whatsoever can be drawn from the CDFA cheese yield data (Taylor, 2485). This is a fatal flaw in the Yale analysis.

In addition, Mr. Yale references the CDFA Class 4b assumption that 0.27 pounds of whey butter is produced and implies that it is reflective of a 92.67% fat capture rate in cheddar cheese. This is in error in three ways. First, Mr. Yale assumes 3.68 pounds beginning fat per hundredweight whereas the CDFA formula states

explicitly that it is premised on 3.72 pounds milk fat per hundredweight. Secondly, Mr. Yale does not translate the whey butter yield to the pounds of fat used to produce that butter. At the 82% butterfat content assumed in the current product price formulas, 0.27 pounds of whey butterfat would be generated from 0.22 pounds of fat. But most importantly, a portion of the fat that is not accounted for in the whey butter assumption may have been assumed by the state to have been lost in the manufacturing process. Therefore, there is no basis for the conclusions drawn by Mr. Yale on this point (Taylor, Tr. 2486).

In contrast, expert witness Mr. Dean Sommer was very clear that 90% remains an appropriate butterfat capture assumption for cheddar cheese manufacture. He testified that extensive multi-year studies conducted at the Alto Black Creek and Waupun plants, which have modern and up to date equipment, showed fat captures ranging seasonally from 89 to 91% (Tr. 2339). Mr. Sommer was also able to rely upon his extensive exposure to other plant operations given his current position as a Cheese and Food Technologist at the University of Wisconsin's Center for Dairy Research. He explained the importance of measuring the fat in the finished cheese, as opposed to assuming that all of the fat that is not in the whey at draw is in the finished cheese. The sources of losses outside of the vat include the milk silos (Tr. 2340), clarifiers (Tr. 2341), start-up / change-over / shut down (Tr. 2341), cheese fines (Tr. 2342), salt whey (Tr. 2344), and equipment surfaces (Tr. 2344). Mr. Sommer explained that a proper analysis, which reflects all of these factors, confirms the appropriateness of the continued use of the 90% retention figure currently used in the formulas (Tr. 2339).

Mr. Sommer's conclusion that 90% remains an appropriate assumption for the percentage of fat captured in the cheddar cheese (Tr. 2339) was confirmed by the testimony of companies who manufacture cheddar cheese regarding their own operating experiences, including Timothy Greenway, Foremost's Marshfield plant, 90.25% (Tr. 1528) and Dennis Shad, Land O'Lakes's Kiel plant, (Hearing Ex. 55 pp. 3-4).

USDA should not set the butterfat value credit in the protein formula at a level below the butterfat capture factor embodied in the cheddar cheese yield factor.

The proposed amendment to set the butterfat credit rate in the protein price formula below the butterfat capture rate in the cheddar cheese yield factor should be rejected. As the witness from Leprino Foods noted, setting it at a lower rate in effect values some volume of butterfat twice. For example, if 90% of the butterfat is priced in the protein price formula at the cheddar cheese value, then it is necessary to ensure that volume is not also priced at the butterfat value. Since Class III fat is priced at the butter value, a credit for the price must be incorporated in the protein formula. This concept holds whether or not a farm to plant loss has been incorporated in the yield equation (Taylor, Tr. 2488).

The witness from Leprino Foods noted how butterfat would be accounted for if, as Mr. Yale proposes, the fat credit in the protein formula is reduced to 89.4% to reflect the fat capture in cheddar after the farm to plant losses are considered. Although the beginning farm fat level is 3.50%, or 3.5 pounds of fat per hundredweight. Through the combination of the farm to plant loss, the fat priced at the cheddar value, and the fat priced at the butter value, a total of 3.5209 pounds of fat per hundredweight would be accounted for and subjected to a minimum price. In other words, Mr. Yale's Proposal would account for and price 0.0209 more pounds of fat than is actually contained in the original farm milk. This is clearly not sound policy (Taylor, Tr. 2489).

The hearing record does not support increasing the cheddar cheese yield of protein factor from 1.383 to 1.405.

This Proposal is erroneously premised on an argument that the percentage of casein in true protein in milk is 83.25%. However, the 83.25% suggested by the proponents is not based upon actual tests of casein levels in raw milk. Rather it is an estimate based upon several rules of thumb, each of which in and of itself is inaccurate and introduces additional errors. Obviously, the best way to determine the proper assumption for the percentage of casein in true protein in milk is to measure it. That is, laboratory tests should be performed on the milk and the casein percentage in the true protein should be determined.

The witness from Leprino Foods noted that, due to the complexity of casein testing, this direct testing is not done routinely in the dairy industry. However, several University studies of this matter have been completed over the years by experts in milk chemistry, and they provided the basis for the current formulas, which are based upon the percentage of casein in true protein being 82.2%. Specifically, one of those university experts who performed these studies is Dr. David Barbano, who testified at the May 2000 Class III and IV formula hearing and specifically addressed this issue. Dr. Barbano indicated that the 82.2% casein in true protein is reflective of milk he had studied (Taylor, Tr. 2493-4).

That conclusion was based upon data presented by Dr. Barbano at the 1999 Cornell Nutrition Conference for Feed Manufacturers, entitled *Trends in Milk Composition and Analysis in New York* (Taylor, Exhibit 69, Addendum 2). Table 2 shows casein as a percent of true protein on the fifth line of numbers from Dr. Barbano's 1984 study of milk from 50 cheese plants across the country. On an annual average basis, casein comprised 81.95% of true protein. Table 8 provides casein as a percentage of true protein for milk that Dr. Barbano studied from three large cheese factories in New York State from 1992 through 1998. The number ranged on an annual average basis from 82.12% to 82.42% and the seven year average was 82.22%.

No witness at this hearing presented actual plant or laboratory data contesting the accuracy of continued correctness of this 82.22% figure.

This kind of actual laboratory testing of milk to determine composition is clearly far superior to the estimation method using rules of thumb that is used by the proponent of Proposal 8. The Yale rules of thumb include the assumption that casein as a percentage of crude protein is 78%, and that there is 0.19 nonprotein nitrogen in crude protein (Yale Exh. 33, page DDD, and Yale Tr. 2224-25). But the Barbano studies showed that both assumptions are not quite correct. Table 6 shows that nonprotein nitrogen varies year to year from 0.187 to 0.196 and averages 0.192; Table 9 shows that casein as a percentage of crude protein averaged 77.19% over the seven year study period (Taylor, Tr. 2495).

This only confirms that the simplest and most logical approach to take in setting a pricing formula based in part on the percent casein in true protein is to actually measure that percent, which is exactly what USDA has done, and should continue to do. The .822 factor should not be changed.

E. USDA should adopt Proposal 9 as outlined above instead of Proposal 10.

Like Proposal 9, Proposal 10 addresses the difference in the value of whey cream versus sweet cream. But as noted above in the discussion supporting the adoption of Proposal 9, since the hearing notice was published, numerous witnesses testified to the actual differences in the value of whey cream versus sweet cream, data which was not available at the time AgriMark submitted Proposal 10. USDA should therefore adopt Proposal 9, which is based on the hearing records evidence, rather than Proposal 10.

F. USDA should adopt Proposal 12 as outlined above rather than Proposal 11.

As noted in the discussion above supporting the adoption of Proposal 12, significant testimony and data was presented at the hearing which clearly supports the complete elimination of the three cent adjustment to the barrel cheese price. Accordingly, Proposal 12 should be adopted, rather than the more limited amendment to the barrel price adjustment set forth in Proposal 11.

G. No testimony or other evidence was presented in support of Proposal 13, and it therefore should be rejected.

H. Proposal 14 would add needless complexities and represents overkill in light of the problem it tries to address.

The issue the proponents sought to address with this Proposal was the lag from market activity to reporting by NASS. This lag, especially in times of fast moving or very volatile prices, can create divergence between NASS reported prices, hence the cost (or expected cost) of the milk input, and the actual market price for the product on a given day. Shortening the delay between the sale of a product

and the corresponding NASS report would reduce this divergence and, at least somewhat, alleviate its consequences.

However, there are other options available to USDA to reduce this lag. The IDFA witness noted, in this age of continuous and instantaneous communication, the NASS survey could be made electronic in reporting, review, auditing, and tabulation. In this way, the price and volume reports could be available on Monday morning, eliminating 4 days from the lag. Adoption of such measures is more consistent with past workings of the FMMO system since Order reform, and much simpler than Proposal 14. USDA is currently in a rule making process resulting from an Interim Final Rule regarding how data is reported and audited for the Dairy Products Prices survey, and IDFA and others made these and other suggestions in comments on that rule. Before adding complexity to an already complex product price formula, we urge USDA to take steps to improve the Dairy Products Prices survey process first as part of that rulemaking process.

I. USDA should not adopt Proposal 15, which would substitute CME prices for NASS prices for all products except dry whey.

The product price formulas used to determine minimum milk prices under the Final Rule are based on the wholesale selling prices of butter, cheddar cheese, non-fat dry milk and dry whey. As a primary building block of federal order minimum milk prices, these wholesale prices determine what handlers pay and producers receive for all milk regulated under the federal order program. Therefore it is imperative that the wholesale selling prices used to determine minimum federal order producer prices represent the wholesale value of the underlying product in the marketplace as accurately and completely as possible. Accurately representing the average wholesale price of these products in the marketplace can only be accomplished by including the largest possible sampling of wholesale prices (Yonkers, Tr. 980).

The product price data should represent transactions from all areas of the country, and not be limited geographically to any one sales region or be based on a market or price adjusted any one region. Finally, such price data should include the largest volume of manufactured dairy products as possible.

Currently, only the dairy product prices survey conducted weekly by the National Agricultural Statistics Service of USDA meets these criteria. Proposal 15 would replace the NASS dairy products prices survey with data from the Chicago Mercantile Exchange (CME) spot markets. However, the IDFA witness noted that, in the Federal Order Reform Final Rule, USDA discussed the many reasons why the CME is not a suitable data source for any of the four products at issue. First, noting that the CME weekly cash butter contract had been used in setting the butterfat differential, the Final Rule states “This price series has been criticized due to the ‘thinness of trading.’”

With respect to cheese, USDA stated in the Final Rule "Criticism of the cheese exchange trading, including inaccurate representation of cheese prices and accusations of market manipulation, reached the point that the National Cheese Exchange (NCE) discontinued trading, and cash trading of cheese moved to the CME. The CME also has received some criticism for thinness of trading." While there exists a cash contract for nonfat dry milk at the CME, USDA noted in the Final Rule that, "There is very limited exchange trading of nonfat dry milk." Finally, there is no cash exchange market for dry whey. (Yonkers, Tr. 982)

Evidence presented at this hearing supports the correctness, both then and now, of USDA's decision in the Federal order reform Final Rule not to utilize CME data. To switch from the NASS data to the CME data would be to switch from a very broad, to an extremely thin, representation of actual cheese transactions. The same is true for butter and NFDM. For the period from January 2000 to December 2005 the NASS survey volumes represented 15.4 percent of all U.S. butter production, while CME trading volumes consisted of only 4.6 percent. Looking at NFDM over that same time frame, the NASS survey volumes represented 78.1 percent of all U.S. production, while CME trading volumes consisted of only 0.02 percent (Yonkers, Tr. 983).

This thinness carries two consequences. First, it raises the very real prospect that the reported prices are not, in fact, representative of finished product transaction prices. But the prices used to set minimum milk prices must be accurate if the entire pricing system is to function properly. Second, these markets are sufficiently thin so as to encourage purchasing for the purpose of causing minimum milk prices to rise, if they formed the basis of minimum milk prices.

In addition to their thinness, the CME market is not national in scope. In the Final Rule, USDA noted that "the scope of the surveys that have been undertaken by NASS, and their geographic representation, appears to be comprehensive." But because the CME spot prices represent transaction prices adjusted to the Chicago market only, the CME spot prices do not satisfactorily capture the national scope of manufactured dairy product markets.

The witness from Kraft testified that the CME price is based on the price of cheese within a 300-mile radius of Green Bay, Wisconsin and any distance greater than 300 miles is discounted by a freight differential. If a cheese plant in Tulare, California sells cheese for \$1.35 per load at the CME to a buyer in Chicago, the price would be discounted by 4.27 centers per pound (the freight differential for 2100 miles). The cheese plant would report \$1.3073 as the sales price to NASS (their net sales price) and not the \$1.35 price that the CME would report for the cheese. Therefore, the NASS price is a measure of the national market price for cheese, while the CME only represents a locally adjusted price for the Green Bay area (McCully, Tr. 1104-5).

In fact, many of the reasons cited by proponents for changing to the CME could be addressed, at least in part, by changes in the NASS survey process. USDA has already implemented an Interim Final Rule making it mandatory to report for all manufacturers of all products eligible to be reported in the NASS Dairy Products Prices survey. This would even further improve the completeness of this data in representing all eligible sales transactions, something the CME market cannot achieve.

As part of that Interim Final Rule, USDA has implemented a process to verify that data submitted on the survey is accurate. As several parties noted in comments submitted on that Interim Final Rule, USDA could require electronic reporting of the NASS Dairy Products Prices survey data, and report weekly data in a more timely fashion.

Proponents of Proposal 15 also claim that the circularity associated with the use of NASS survey prices would be eliminated if USDA instead used the CME spot market prices. This claim appears to be based on the concept that industry participants commonly use the CME as a reference price, and actual sales prices for wholesale dairy product transactions occur at a set premium or discount to the CME price. Proponents claim that by adopting the CME instead of the NASS survey prices, market participants can merely adjust this discount or premium to account for any higher costs of processing.

This argument ignores marketplace realities. It is very difficult for sellers of homogeneous non-differentiated commodities such as commodity cheddar cheese to extract a premium from the marketplace. The buyer will always have the alternative of purchasing product from the CME, where they will not have to pay the premium, or to procuring the product from a competitor that is not similarly increasing prices (Yonkers, Tr. 987).

J. USDA should not adopt Proposal 16, which would add complexity to the already too complex product price formulas.

Proposal 16 seeks to shift the value from a product (dry whey) whose yield is driven largely by one component (lactose / other solids) to a different component (protein). The witness noted that the lactose variability in milk is much lower than the protein variability in milk, and the two components are perfectly correlated. Therefore, adopting this Proposal would result in changing the manufacturing economics for milk with certain milk component levels based only on the regulated component price, not the realities of the yields attainable. Additionally, the Proposal transfers revenue between breeds of dairy cows in a way that is not justified.

As the witness from Leprino Foods noted, the current set of product price formulas for Class III milk represents an intuitive understanding of the components of dairy products. Products with protein, fat, other solids, or some combination, are priced

with those components in mind. In the case of Class III milk, this means the protein and fat that remain in the cheese are priced based upon the value of cheese. The other non-fat solids that remain can be dried and sold as dry whey, and their value in the current price formulas reflects this (Yonkers, Tr. 988).

As can be seen in the Department's Preliminary Economic Analysis, the assignment of the value of whey to the protein component will increase the cost of high protein milk while reducing the cost of low protein milk. Since the other solids components of milk do not move parallel to the protein content and are, in fact, relatively constant across breeds, these cost shifts are inconsistent with the whey yield that would be expected from high and low protein milk (Yonkers, Tr. 988). Thus, the minimum prices would not reflect the actual value of the milk to the manufacturer. This is anathema to the philosophy of the federal order system.

K. USDA should not adopt Proposal 17, which would require automatic, monthly updates to the make allowances based on changes in price indices representing costs of electricity and other energy inputs.

Proposal 17 would require automatic, monthly updates to the make allowances based on changes in price indices representing costs of electricity and other energy inputs. Several witnesses expressed concerns that adoption of this Proposal would negatively impact the liquidity in futures and options markets, reducing the ability of all dairy industry market participants to manage price risk. Risk management tools are vitally important to our members' customers and we oppose Proposals that threaten their liquidity. Liquidity depends upon attracting a sufficient number of participants on both the purchase and sale side of futures contracts. The unpredictability that would be added by the addition of an automatic energy cost adjuster to the class formulas would increase the riskiness of futures contracts and decrease participation in the sale and purchase of those contracts. We believe that the increased basis risk that will result from adoption of Proposal 17 would reduce both customer and speculator liquidity. Both are critical to maintaining successful risk management tools. (Taylor, Tr. 2500)

Additionally, the witness from Kraft testified, "... [T]he Proposal to add an energy adjuster would add basis risk to futures prices. Specifically, adding an unknown energy adjuster introduces an unpredictable element to the price formula and would likely deter market participants from using futures for hedging. Given the volatility of milk prices and need for risk management tools, any Proposal that would negatively impact these tools should be rejected." (McCully, Tr. 111-2)

L. At this time, USDA should not adopt Proposal 18.

The Proposal presented by Mr. Paul Christ is innovative and has the potential to base regulated minimum milk prices on the competitive market for farm milk, rather than the current product price formulas which rely on the competitive market for certain manufactured dairy products at the wholesale level. However, as Mr.

Christ himself admitted, the Proposal as presented omitted many details necessary to allow USDA to make such a major change in the basis for setting minimum milk prices (Tr. 2638, 2660, 2662-5).

M. USDA should not adopt Proposal 20, which would require dairy product manufacturers to cover any increase in costs of processing through the use of surcharges rather than incorporating cost increased in the make allowances used in the product price formulas.

This Proposal requires the same procedure to determine changes in cost of manufacturing as are currently utilized by USDA in deciding to change a make allowance. However, instead of using the results of that determination to change the make allowance and allow the minimum farm milk price to change so that processing and marketing costs are reflected in regulated minimum prices, Proposal 20 would leave the make allowance unchanged. It would simply identify the amount of the cost increase and require handlers to try to negotiate with their customers in an effort to recover these increased costs in the form of a surcharge added to the wholesale dairy price. If this “let’s hope it works” effort fails, the processor and others like it are doomed to returns inadequate to cover their costs, given that the minimum milk prices to farmers they will continue to be obligated to make will not have been changed whatsoever. While this might sound good in theory, several witnesses noted that in practice it would be an utter failure (Davis, Tr. 1568-72; McCully, Tr. 1100-1).

The proponent witness cited what he claimed were several examples of surcharges like the ones he envisions being attempted by manufacturers to effectuate Proposal 20. However, two of those examples are regulated charges that all regulated processors must pay (the MilkPEP check off assessment and the Pennsylvania Milk Marketing Board over order prices), so no one can avoid having to bear them. And, the third example was DairyAmerica's attempt to implement an energy surcharge on nonfat dry milk prices. But during re-direct, the witness noted that even such a large U.S. supplier of nonfat dry milk was only a small player in international markets. Certainly, it would be improbable if not impossible for such a small international player to change long established terms of trade by introducing a new surcharge based simply on USDA's determination that costs of processing in the U.S. allowed for such a surcharge. (Yonkers, Tr. 2571)

One of the fatal flaws in Proposal 20 is that processors regulated by Federal orders face competition from not only unregulated areas and even unregulated milk in Federal order marketing areas, but also from states like California which has its own milk price regulations and is unlikely to change its longstanding practice of changing (increasing) make allowances in response to changes to costs of processing. The witness from Leprino Foods noted that even if unregulated or state regulated cheesemakers did extract the additional surcharge value from their customers, they would have no incentive to list it separately on

their invoices or report it separately, as Proposal 20 would require in order for the premium to be excluded from the calculation of the product price for purposes of setting the regulated minimum milk price. In fact, unregulated or state regulated cheesemakers would in all likelihood choose to disadvantage their competitors, by reporting the higher price as part of the NASS survey, which would under the federal milk order formulas immediately translate into a higher regulated minimum milk price applicable to their federally regulated competitors (Taylor, Tr. 2502).

As noted by the witness from Leprino Foods, Proposal 20 would be an experiment whose success would be quite unlikely and whose failure would have profoundly negative impacts on federally regulated handlers and ultimately their suppliers (Taylor, Tr. 2503).

It is interesting that two dairy producer witnesses testified to the natural workings of the market for bull calves (Squire, Tr. 538-9 & 548; Genske, Tr. 1816-7). Both noted that when the cost of feed goes up, the price of bull calves drops - this is because the feed price represents the primary cost in converting a bull calf into a marketable steer (Squire, Tr. 538-9). The price of bull calves also drops when the end market softens for steers. There is no regulatory factor, actual-proposed-or-imaginary, that intercedes between the market price for steers and the cost to raise bull calves on the buyer side of the market for bull calves, and the value of a bull calf being sold. These market anecdotes illustrate perfectly the unnatural, counter-intuitive essence of Proposal 20, and unequivocally demonstrate that, counter to the testimony of Mr. Gallagher of Dairyalea, real world markets do not operate by passing all increases in costs of production or processing up the marketing chain.

The same is true of a manufactured dairy product. The value of the input is the value of the output less the cost to convert. There is no additional money that becomes available because either the market went down or costs went up. Therefore, as in the example of the bull calves, the only applicable price to the producer is that which subtracts the conversion costs from the finished product cost. Simply allowing a portion of either the costs or the final value to be overlooked in order to affect the producer price for milk would be as unnatural as expecting someone to do so when selling a bull calf.

Respectfully Submitted,



Robert D. Yonkers, PhD.
Chief Economist
International Dairy Foods Association
1250 H Street NW, Suite 900
Washington, DC 20005
(202) 737-4332