

**AFBF Analysis of National Milk Producers Federation
Foundation for the Future Proposal**
AFBF Economic Analysis Department

1) Executive Summary

In response to the increase in variability of milk prices and disastrous returns in 2009, National Milk Producers Federation (NMPF) developed a multi-faceted program to replace current federal dairy programs. Foundation for the Future (FFF) replaces the current Milk Income Loss Contract (MILC) and Dairy Product Price Support Program (DPSP) with a tiered margin insurance program called the Dairy Producer Income Protection Program (DPIPP). FFF includes a Dairy Market Stabilization Program (DMSP) to reduce milk supplies when producers experience tight margins and incorporates changes to the federal milk pricing system. The Cooperatives Working Together (CWT) program would be continued as an export assistance program only.

Major questions surrounding the proposal include: a) impact on milk prices, b) cost of the base and supplemental insurance tiers, c) price of producers' premiums on supplemental coverage, d) operation of the supply management program, and e) impacts on changes to milk pricing and federal orders.

A report from the Food and Agricultural Policy Research Institute (FAPRI) at the University of Missouri finds the program will reduce price volatility and will help the industry recover from times of economic stress.¹ AFBF analysis suggests that the base and supplemental coverage levels can fit within CBO baseline budget with some slight modifications. Assuming optimal coverage levels similar to the LGM-Dairy program and some government subsidies, premiums are at reasonable costs for producers. AFBF believes that more research is needed on the interaction between the supply management program and the base and supplemental coverage levels, but this is the least restrictive approach to supply management offered thus far. However, current AFBF policy does not support mandatory supply controls. The competitive pricing scheme included in FFF is a step in the right direction for the industry.

Possible considerations for implementation of the DPIPP and DMSP include: a) making participation in DMSP contingent upon participation in the DPIPP, b) requiring producers to be responsible for administrative fees for the program – similar to the Noninsured Assistance Program (NAP), and c) using the funds from the market stabilization program to increase the subsidy on premiums for the supplemental coverage.

2) Introduction

In response to disastrous returns to the dairy industry in 2009, the National Milk Producers Federation (NMPF) developed a multi-faceted program to replace current federal dairy programs. Foundation for the Future (FFF) replaces the current Milk Income Loss Contract (MILC) and Dairy Product Price Support Program (DPSP) with a tiered margin insurance program. FFF includes a market stabilization program to reduce milk supplies when producers experience tight margins. It also recommends changes in Federal Milk Marketing Orders (FMMOs) and continues the Cooperatives Working Together (CWT) program as an export assistance program only.

¹ Brown, Scott (2010). "Analysis of NMPF's Foundation for the Future Program." FAPRI-MU Report #05-10. http://www.fapri.missouri.edu/outreach/publications/2010/FAPRI_MU_Report_05_10.pdf

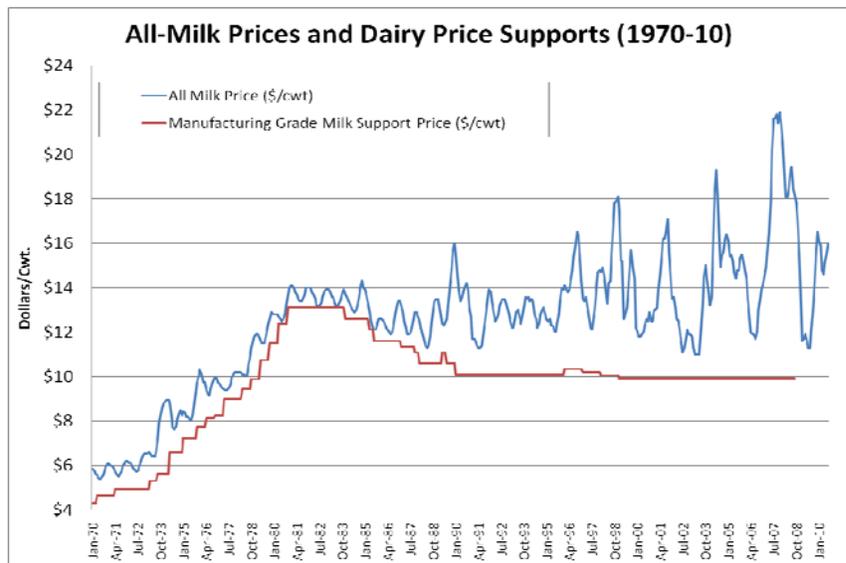
To its credit, National Milk Producers Federation’s (NMPF) proposed redesign of federal dairy policy represents the most sweeping changes to federal dairy programs since these policies were first put in place over 70 years ago. Most of the FFF suggestions would add greater emphasis on market-oriented strategies to address industry challenges. Insurance concepts and competitive pay prices are among these features. Given the tight budgetary constraints likely to exist when the next farm bill is written, the proposal attempts to stay within the dairy program’s allotted budgetary baseline. However, other areas of the proposal require more in-depth analysis. To date, only the Food and Agricultural Research Institute (FAPRI) at the University of Missouri has released an analysis of the proposal. Most importantly, the Congressional Budget Office (CBO) has not scored this program. Due to the dearth of economic analyses of these proposals, this paper analyses the concepts of FFF. This paper will be updated as more quantitative information becomes available from academic and industry sources.

One of the challenges represented by the policy proposal is it requires a different way of thinking about government support than has been used in the past. While past programs have protected a set price level – a level that has meant less as production cost inflation continues to work – FFF is designed to protect a margin. While the margin is fixed, the likelihood of that margin level being tripped depends a great deal on the future outlook. If one expects dairy farmers to overproduce, or as some would say, consumers ‘under consume,’ then the likelihood of low margins and high government costs could result. Conversely, if one thinks markets are going to be strong and export markets are going to provide a positive boost to the industry, then a higher set of margin expectations will produce substantially lower expected costs. Of course, no one knows the future with any certainty, but this is a critical question regarding the operation of the program and how well it will provide protection to producers.

3) Dairy Producer Margin Protection Program (DPMPP)

A. Dairy Price Support Programs – A Short History: It is helpful to understand the motivation for making this break with the past. Recall that the Agricultural Adjustment Act of 1949 provided a price support level for milk and established the product purchase program. The late 1970s and early 1980s were critical times for dairy policy. Inflation dominated concerns about policy. With an expectation of 5 to 6 percent annual inflation for the following years, the 1981 Farm Bill established the support price for milk at \$13.10/cwt, which was scheduled to rise by law to \$14.60/cwt for fiscal year 1985. These expectations of ever rising government mandates for the price of milk quickly came to a halt.

The Dairy and Tobacco Adjustment Act of 1983 pegged the support price of milk at \$12.60/cwt and authorized the Secretary to make further reductions in the support price if the government continued to take excessive amounts of



product off the market. Through this and other legislative actions, the milk price support hit \$10.10/cwt in 1990, and today it stands at effectively \$9.90/cwt.

When supports were set at high levels in the past, milk prices were relatively stable. The price support level effectively was the price. In the spring, processors sold product to the government and purchased some back in the fall. However, the government did not clear all of its stocks every year, so inventories began to build. This provided a constant overhang for the market precluding any significant upside price movement. Other commodities including grains, oilseeds, and cotton learned this lesson, as well. As long as commodity prices were supported by government removals, if the support prices were set high enough for the government to actually have stocks in hand throughout the year, there was no way prices could move above the government sales price. In other words, stability was possible through government intervention, but it came at the cost of stronger market-based returns.

With the steady reduction in the support price for milk, government purchases became much less frequent. This also led to milk prices moving up sharply in some years with the support price playing much less of a role in the function of dairy markets. For most of the last 20 years, milk prices have averaged well above support levels. At the same time, the variability in milk prices has also increased significantly. (*See graph: All-Milk Prices and Dairy Supports.*) Where prices may have moved from a low of roughly \$12/cwt in the mid-to-late 90's to highs in the \$16 to \$18/cwt range, this decade has seen prices dip to less than \$12/cwt on three separate cycles, but prices also hit highs of \$22/cwt. The last cycle saw prices going from \$11.70/cwt in July 2006 to \$21.90 in November 2008 but then back to \$11.30 in July 2010. This marked one of the most volatile periods of milk prices on record. It is interesting to note that the down side of these prices has not necessarily been any lower, what has generated variance is the strong upside movement.

Moving away from a set level of price protection represents a significant shift in the approach taken in milk policy for over seven decades. Historically, the federal government has supported the price of milk by standing ready to purchase all cheese, non-fat dry milk powder (NFDM) and butter offered at a price that could be converted back to legislative minimums for the price of milk. With the 2008 farm bill, a shift was made to set purchase prices for the products, but the prices specified were still designed to reflect a particular price of milk.

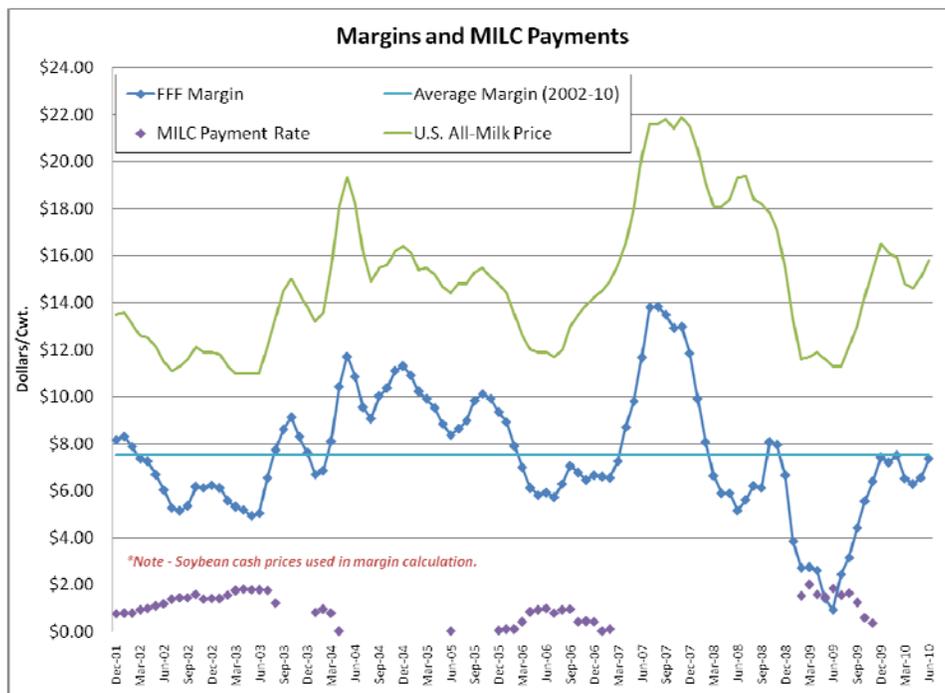
B. Elimination of Current Federal Dairy Programs: First, FFF shifts the focus of dairy industry support from raw milk and/or product prices to producer margins. The entire livestock industry has been in a state of flux since increased ethanol demand created competition in corn input markets. Prior to this era, dairy producers experienced relatively little volatility in feed prices. Therefore, milk prices generally served as a proxy for the industry's financial health or lack thereof. Recent volatility in milk price levels due to decreased real levels of support from Federal dairy price supports, droughts in top world dairy producing regions, and increased U.S. dairy exports have led to greater volatility in milk prices. Taken together with corn prices that moved from \$2.14/bushel to \$5.45/bushel over a 24 month period has generated margins swings of over \$14/cwt. Dairy producers are now operating in a riskier environment than they have in the past.

For numerous and valid reasons outlined in FFF, the DPSP is incapable of providing past levels of support. During the dairy price crisis of 2009, the U.S. government purchased 23 million pounds of butter and 264 million pounds of NFDM. Despite the fact that cheddar cheese fell to support price levels, the Commodity Credit Corporation did not purchase any cheese because of packaging and content specifications. Most cheese processors not longer desired the government as a customer and

were unwilling to reconfigure their product lines. For years, the program’s product specification had discouraged innovation for dairy processors, with the non-fat dry milk market still highly dependent on the program. Last year, the DPSP priced the U.S. out of export markets for milk powder, and U.S. dairy exporters lost potential export business due to announced increases in support levels.

Performance of the MILC program is currently being debated. According to the Congressional Budget Office, MILC paid out \$775 million to dairy producers in fiscal year 2009. Congress provided an *ad hoc* appropriation for the program at the end of 2009. In the 2007 Farm Bill, a feed cost adjustment was added to the Boston Class I target price trigger to compensate for increased feed costs. The feed cost adjuster did provide dairy producers with some additional assistance, as target prices increased an average of \$0.60 from November 2008 to June 2009 according to data obtained from University of Wisconsin’s MILC Payment Simulator. Target prices have remained at \$16.94 since that time.

During 2008-10, MILC performed as legislated. The perceived ineffectiveness of the MILC program is likely due to the depth of pain experienced in the industry. It was simply not designed to provide a large level of support during a time of historic income loss. There are several reasons for this. A) MILC was first introduced in the early 2000s as a compensation payment to producers who did not receive benefits from the Northeast Dairy Compact. B) Subsequent farm bills have reauthorized MILC as a counter-cyclical payment to producers during times of *low prices* only. C) The MILC payment only pays on 45 percent of the difference between the Boston Class I price and the target price and currently includes a size limit of 2.985 million pounds of milk. This is the production of approximately 145 cows.



Historically, MILC payments have been made during months when margins were below average prior to 2007. MILC payments were not made in early to mid 2008 when the all-milk price was well above \$18, yet margins were below average. MILC payments were made during eleven of the 12 months in 2009. The fiscal limitations on the program, namely production caps and payment rates, have exacerbated

that view that MILC did not protect equity and investment. In the recent recessionary period, few if any industries had that type of protection.

C. FFF Refocuses Government Policies on Margins Rather Than Prices: One of the inspirations for the Foundation for the Future project was the Livestock Gross Margin Insurance program for dairy (LGM-Dairy). Few producers have taken advantage of the LGM-Dairy program due to its cost and complexity. LGM products for hogs and cattle have also been slow to catch on. However, the margin insurance concept became the foundation for NMPF's proposal for a national program to support average dairy margins. In an environment where both feed prices and milk prices can fluctuate dramatically, this approach has generated significant interest. NMPF proposes a "base" guarantee program and levels of subsidized government margin insurance that producers can purchase if they desire additional margin protection. Those programs will be studied more deeply in subsequent sections.

FFF uses a national average margin trigger and offers a new calculation for this margin. First, FFF relies on income minus feed costs only. This is because feed costs represent the largest category of input costs, while other inputs like labor, veterinary expenses, etc. are highly dependent on individual management strategies. Instead of using current measures of feed costs from USDA, such as the 16 percent dairy ration or ERS' cost of production series, FFF proposes a new calculation of feed costs to incorporate feed costs for the entire dairy enterprise, including feed costs associated with heifer raising and maintaining dry cows. The FFF margin formula uses CME nearby futures prices for corn and soybean meal, USDA survey prices for alfalfa, and USDA's announced All-Milk price, as it the best indicator of a national average price of milk for all uses. The FFF margin is:

Margin = Milk Price – [(1.192 x Corn Price) + (0.00817 x Soymeal Price) + (0.0152 x Alfalfa Price)]

Where,

Milk Price = USDA/NASS All-Milk Price (\$/cwt.)

Corn Price = CME nearby contract corn price (\$/bu.)

Soymeal Price = CME nearby contract soymeal price (\$/ton)

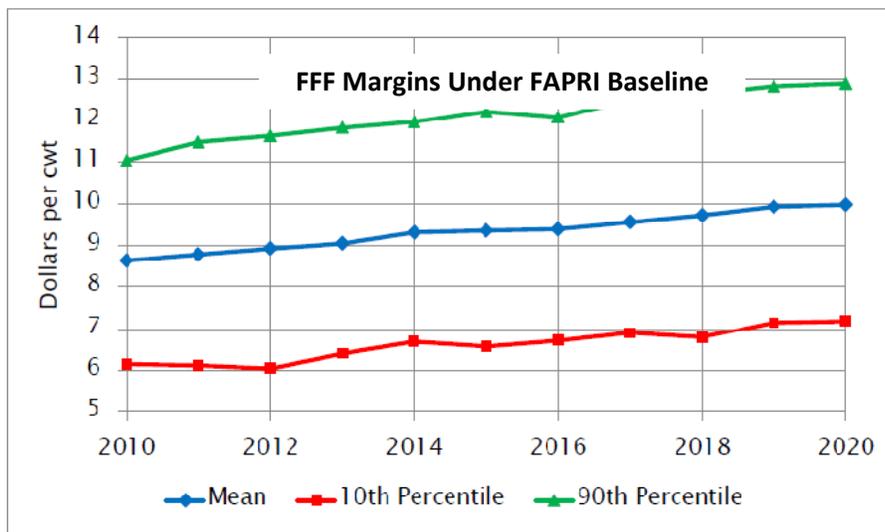
Alfalfa Price = USDA/NASS alfalfa price (\$/ton)

It is important to recognize this is a national program. These margin payments are activated when the national margin – the difference between the national average all-milk price and the nationally calculated feed cost from the formula above – drops below a predetermined margin level. Individual producer margins may be above or below that predetermined national margin, just as today's MILC program payments are calculated for the entire country off of one price point. Unlike LGM-Dairy or hedging strategies, it may be more difficult for producers to incorporate individual production decisions and feed rations into this program. However, the U.S. dairy industry does not have a great deal of experience using risk management tools. Consequently, this kind of base program may be the preferred strategy to move producers toward more hedging strategies. Supplemental coverage offered through this program allows individual producers to insure additional protection against national margin risk but not individual farm risk.

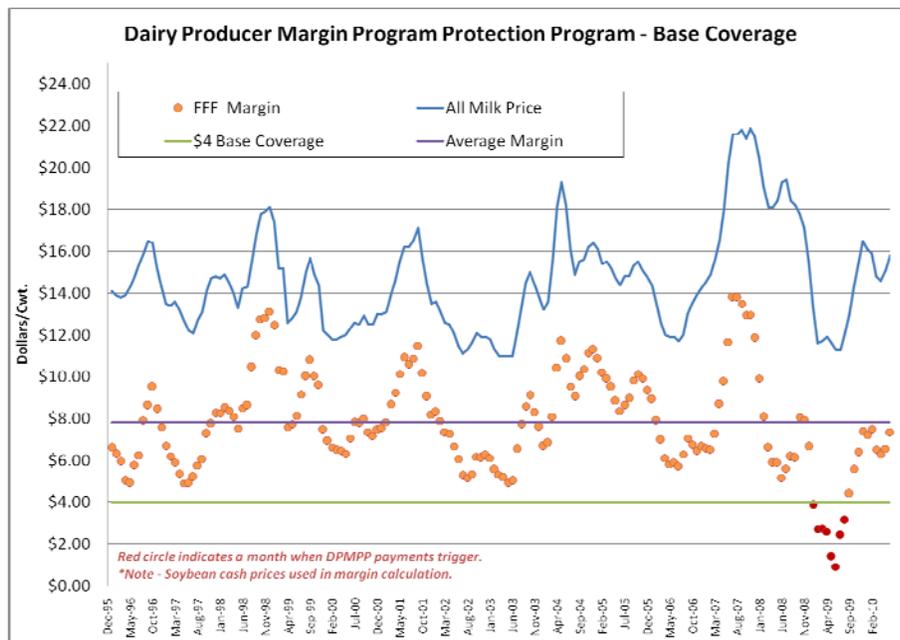
D. Establishes a Base Margin Guarantee: In direct response to the loss in equity experienced by producers in 2009, FFF proposes a base margin guarantee. The government will provide a payment to producers when the national margin falls below half of the margin projected by Congressional Budget Office. Historically this has averaged \$4/cwt. USDA will make this payment on 90 percent of a producer's base milk production. The base for the margin protection program is a producer's highest

production level in the three previous years. A producer without at least one year’s production history will be allowed to use his or her latest monthly production and extrapolate it to twelve months. The producer will not be allowed to establish a higher base if he or she increases production. That base stays with the farm and/or farmer and will be a producer’s base for the entire duration of the Farm Bill. The program will be administered through USDA’s Farm Service Agency (FSA).

It is important to note the \$4 figure is a benchmark of historical margins – not the actual guaranteed level. Additionally, the guaranteed level will be half the Congressional Budget Office’s projections for dairy margins that year, “plus or minus \$1 depending upon the level of CBO’s projection.” Thus, the median margin levels for each year and the base value of the guarantee have not been determined yet. The range likely was added to give the program flexibility as it is constructed. It does not detail who will decide on what level to cover. Unlike the MILC program that makes monthly payments, the FFF base program will make payments to producers quarterly by averaging the margin for the three month time period.



The issue of a base level of support being determined by projections brings the baseline itself into question. Historically, CBO’s projections closely follow FAPRI’s baseline outcomes. Given the need to incorporate soymeal and alfalfa prices, not currently provided in CBO’s baseline projections, the implied level of support suggested by the FAPRI baseline is provided. Included with the average level of their margins are ranges around those expectations. Notice that in only 10 percent of the cases did FAPRI expect annual average margins to run less than \$6.00/cwt.



Looking at 15 years of history in the Dairy Producer Margin Protection Program – Base Coverage graph, base payments would

have only been paid to producers in eight of twelve months of 2009. Even during the low margin months of 2002 and 2006, base payments would not have been triggered. This portion of the program is intended to cover catastrophic losses only. Higher base coverage levels would obviously cost more. Depending upon the program's score, the base level could be adjusted to fit the entire program within the baseline and provide meaningful subsidies on supplemental coverage.

FAPRI's analysis of FFF suggests modest changes to dairy markets from this proposed policy. Removal of the price support program in addition to other program provisions are estimated to change the all-milk price by an average of less than one or two cents per hundredweight after the initial year of the program. In the first year, where the price effects are the greatest, the change in milk prices is less than 0.3 percent of the all-milk price. In effect, this policy is expected to leave the market situation essentially unchanged.

E. Cost Estimates: The fundamental question around the DPMPP is what it will cost. Only one agency can give the official answer to that question – Congressional Budget Office. However, one can make some conservative estimates based on potential approaches to this problem. With any revenue or market price based program, CBO considers a distribution of prices around some averages and the notion of a one-sided bet. The one-sided bet concept is based on an increased likelihood of raising government spending as support levels get closer to expected market prices. In the “old” days, CBO did not use this approach, and Congress would frequently take advantage of the scoring method by placing government support levels just under CBO price projections.

The approach now taken by CBO recognizes a distribution around prices exists and considers the expected value – or weighted probability – cost of some new policy option, given CBO's projection of a given market. Take current dairy policy as an example. CBO projects all-milk price will average \$17.35/cwt in 2012. Typically the Boston Class I price, the price used to determine if MILC payment should be made, averages \$2.30/cwt above the all-milk price. Consequently, the CBO projection of a \$17.35/cwt all-milk suggests a Boston Class I well above the \$16.94 trigger. Yet CBO projects over \$60 million in MILC payments alone. Further, that same \$17.35/cwt all-milk price can only come from cheese, powder and butter prices well above the equivalent \$9.90 support. But here again, CBO projects the government will purchase over \$70 million of product in price support related activity.

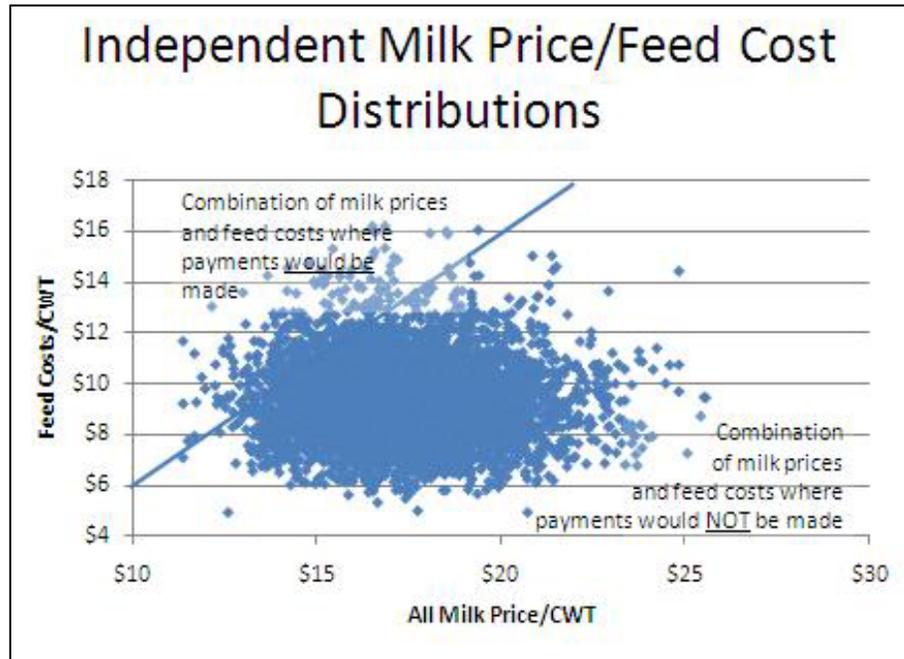
This is because there is a probability distribution of low price events occurring, so some cost related to that probability is calculated into spending for that year. Part of this distribution comes about through price changes within the year – CBO is making annual projections after all. But another large share comes from recognition of errors in CBO's forecasts of agricultural markets. CBO's exact range and distribution of milk prices is unknown to outside parties.

This concept is used to tackle the potential scoring problem. First, the minimum all-milk price is assumed to reach as low as \$11.50 and as high as \$25.50. This is a normal distribution around \$17.35/cwt with a standard deviation of \$2.08/cwt. Similarly, feed costs are assumed to have a mean of \$9.35/cwt and a standard deviation of \$1.60/cwt that yields a range of approximately \$5.00/cwt at the minimum to a maximum of \$16.20. Recognize again that the policy provides protection for the margin, not just the price. So, the relationship between price and feed cost becomes a relevant question.

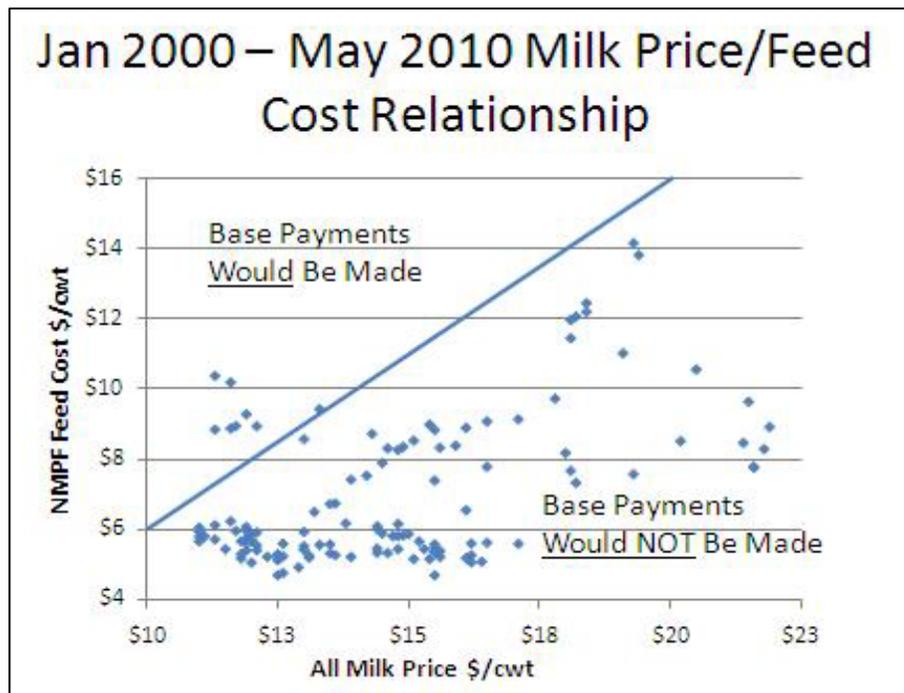
The simplest approach is to assume no relationship between milk prices and feed costs. In other words, the two are independent of each other. That approach suggests a distribution of milk prices and feed costs similar to the graph, *Independent Milk Price/Feed Cost Distributions*. This figure indicates a

random draw of 5000 milk prices and feed costs using the parameters above. These draws were made independently –

meaning there is no relationship between the two. Note the line running diagonally across the graph. All of the combinations above the line would trigger a payment, while those below would not. The sample suggests 6 percent of those dots fall above the line. Out of the 5000 draws, assuming payments on 180 billion pounds of milk, the average cost of the base program is \$110 - \$115 million per year for the \$4 base guarantee proposal.



In reality, there is a relationship between feed costs and milk prices. The next graph, *Jan 2000 – May 2010 Milk Price/Feed Cost Relationship*, shows the actual distribution of milk prices and feed costs over the last 10 years. Again, anything above that line would have triggered a payment under the margin scenario. Payments based on this actual distribution only occur 2.4 percent of the time. In other words,



using the independent distributions assumed earlier are likely overestimating the cost of the program by a factor of 2 to 2.5. This would lower the program’s cost to the \$40-\$50 million per year range, well within the CBO baseline. In other words, the base program should be affordable and within budgetary constraints

F. Supplemental Buy-Up Coverage Provision: Another key component of the margin protection provided in the FFF plan is an optional buy-up provision. Producers would be allowed, based on their individual preferences, to purchase additional margin protection above the base program. As proposed by National Milk, the cost of what is essentially an insurance program would be subsidized at decreasing rates. Like the base program, the fundamental question around the buy-up tier comes down to money. How much will it cost? What will be the likely level of government support? How often would it be executed to pay out?

Estimating the potential cost of such a program does present significant challenges. Previously mentioned distributional issues discussed above, participation levels, and the levels of government subsidization for the various protection levels that could be selected by producers complicate the potential scoring of this program. Work by Valveker, Cabrera, and Gould (2009)² examined various strategies producers might consider when selecting optimal coverage of dairy margins over feed costs using LGM-Dairy, the new dairy margin insurance program. This study uses a representative 120 head Wisconsin dairy operation as the test case. With a \$5 margin target, they found the optimal level of insurance coverage for the operation was to protect 52 percent of production on a ten-month basis, with the exact level protected varying on a monthly basis. The expected cost of the producer premium was just over 1 percent of the value of the milk produced. Had the farm opted to cover a constant 52 percent throughout the year, the total cost of the coverage would have nearly doubled to 1.8 percent of the farmer's margin.

Taking this as a starting point, AFBF's analysis will assume that producers would divide into three equal groups selecting \$5, \$6 and \$7 coverage levels for margin protection. The Valveker (et. al.) paper suggests the optimal level of milk covered under the LGM program should rise by roughly 10 percent for every dollar increase in the desired level of margin coverage. However, this analysis will assume that all producers are risk adverse enough to elect 70 percent coverage on their production, as the \$7 margin group would. Finally, if a set of subsidies assumed to be provided by the government are set at 65 percent for the \$5 margin, 50 percent for the \$6 margin and 35 percent for the \$7 margin, the expected cost of the program under the observed distribution of milk prices and feed costs would range from \$60-\$70 million. At these assumed subsidy levels, a producer's cost spread across all milk produced would be the following: a) 2-3 cents/cwt for the \$5 coverage, b) 5-6 cents for the \$6 coverage, and c) 8-10 cents/cwt for the \$7 coverage.

If the base program cost \$45 billion per year and the buy-up provisions described above cost \$65 million annually, the FFF would exceed the CBO baseline slightly (by \$10-\$15 million per year) for the next ten years. A number of variables could be tweaked to bring to further align the program with the eventual CBO score. Initial estimates would indicate that both the base and buy-up program could be crafted to provide beneficial protection to producers and to fit within the confines of a CBO score.

G. Concluding Thoughts on DPMPP: The DPMPP is a hybrid of a counter-cyclical payment program (base) and, assuming budgetary issues can be dealt with, a supplemental coverage program. At its core, this program directs spending to assist producers when they suffer prohibitively low margins. This is a change in philosophy for the industry. The program can be modified to fit within its CBO score, but will the necessary alteration ultimately satisfy producers?

² Valvekar, Cabrera and Gould (2009). "Identifying cost-minimizing strategies for guaranteeing target dairy income over feed cost via use of the Livestock Gross Margin dairy insurance program." J. Dairy Science 93:3350-3357 doi:10.3168/jds.2009-2815

4) Dairy Market Stabilization Program (DMSP)

A. Operation and Overview: In part, because of the oversupply situation in the industry in 2009, FFF includes a supply management program. The goal was to reduce production only when absolutely necessary, i.e. when producers are confronted with low margins. The program intends to remain as export-oriented as possible, meaning it would not result in prices rising to the point where the U.S. dairy industry would be uncompetitive in export markets. Finally, it seeks to allow producers to grow as markets dictate and remove some margin volatility in the process. Major provisions include:

USDA will calculate the monthly margin for both the DPMPP and the DMSP using identical methodology. The margin trigger levels for the DMSP will be set as follows:

- 1) When the actual national margin is below **\$6.00** for **two** consecutive months, producers will receive payment for 98% of their base milk marketings and be subject to a **maximum reduction** in payment equal of **6%** of current milk marketings;
- 2) When the actual national margin is below **\$5.00** for **two** consecutive months, producers will receive payment for 97% of their base milk marketings and be subject to a **maximum reduction** in payment equal of **7%** of current milk marketings;
- 3) When the actual national margin goes below **\$4.00** in a **single** month, producers will receive payment for 96% of their base milk marketings subject to a **maximum reduction** in payment equal of **8%** of current milk marketings.

The base milk marketings will be a rolling three-month average of the most recent milk marketings prior to the notification from USDA.

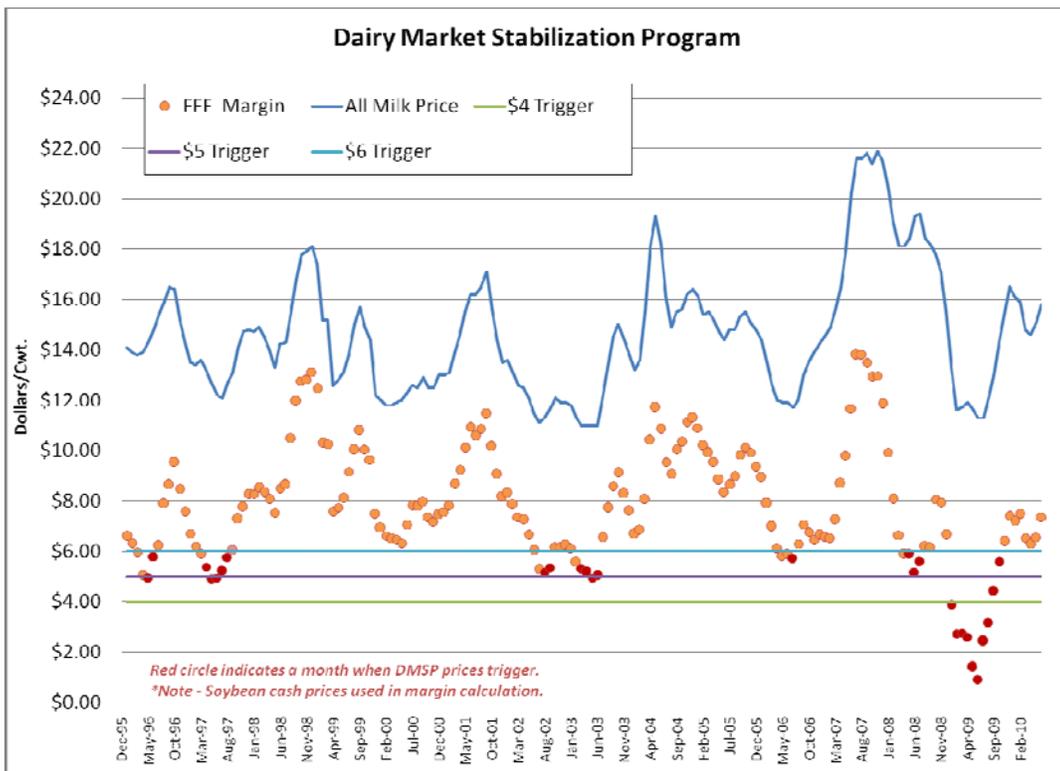
To address any conditions specific to individual operations, a producer will have the option of choosing the same month in the previous year as his/her base, making the selection annually.

Conversely if the actual national margin exceeds the \$6.00 trigger level margin for two consecutive months, the DMSP program will be discontinued. If either of the U.S. prices for cheddar cheese or skim milk powder (SMP) is 20%-30% higher than the world price for the applicable commodity for a period of 2 consecutive months after the DMSP has been implemented, DMSP will be discontinued unless the national average margin is below \$4.00

The DMSP is intended to cover all producers in all markets and will be administered by USDA's Agricultural Marketing Service (AMS).

The fact that producers are paid on only a percentage of their marketings when this provision is in effect attempts to signal producers to decrease production only in times of financial stress, like 2009. This was done through the voluntary CWT approach in 2009. However, if over the payment base milk is shipped, it is not removed from the market. Revenues generated from this over-base milk will be collected in the same manner as check-off promotion funds but will be used only to encourage more use of dairy products by food banks, the school lunch program, etc. Under the proposal, a DMSP Board would be established to spend this funding.

This program operates on a monthly basis – not a quarterly one like the DPMPP. USDA will announce a reduction in the portion of milk being paid 30 days prior to those reductions going into effect. FAPRI’s report also acknowledges that this program will work to reduce payments under the DPMPP program, as these triggers will likely limit surplus milk production. The FAPRI report does not elaborate on this relationship any further, nor does the report detail how quarterly DPIP payments compare to a monthly payment scheme. However, it is likely that this tiered DMSP pricing scheme will go into effect before DPMPP base payments, as that payment is made after the end of the quarter rather than pay price reductions that can be levied monthly. Because FAPRI runs an annual baseline, these relationships may not be fully described.



It is important to note that this program is not likely to trigger often. Since 1995, this program would have been activated approximately 25-27 times in the span of 174 months, about 15 percent of the time. AFBF used cash soybean meal prices in the graph above, but this range is fairly close to FAPRI’s estimates. However, there is one case where this program may be problematic. The trigger under the base would have been activated during the summer of 2008 when June and July milk prices were \$19.30 and \$19.40/cwt, respectively. Because the U.S. was operating at world prices the export price counter-measures would not have prevented reduced pay prices from going into effect, even in the face of near record milk prices. Granted, prices went south that fall, but efforts to curb production in high-price situations may be politically untenable.

B. How Much Funding Will Be Generated? Another important question relates to the funds generated from this provision. The milk will remain in the system, thus sales from over-base milk will be indistinguishable from regular market sales. Revenues from over-base milk will return to order

administrators and will be held back. In essence, when the program is triggered, producers will be 'giving' a portion of their milk to the government to be spent at the discretion of a board.

The current iteration of the proposal suggests spending the money on nutrition programs, but this is not the only potential use for the funding. Other FFF iterations used the money for expanding demand programs through export assistance or promotion funding. Paying down the cost of the supplemental premiums could be a way to spend the funding and to boost the fiscal soundness of the entire proposal.

So, what funding levels could be generated by this provision? Since January 2000, the DMSP would have triggered at various levels 14 out of the 124 months. The revenue represented by that milk would have averaged \$70-\$75 million per year. However, this is an average range – 70 percent of those total revenues came in 2009, which increases the overall 'average' significantly.

5) Federal Orders and Pricing Changes

A. Historical Overview and Proposed Changes: FMMO reform legislated during the 1996 Farm Bill included a mandate to replace the Basic Formula Pricing (BFP) scheme to producers being paid on the basis of components. The BFP was based on the Minnesota-Wisconsin pricing series, which was a survey of producer pay prices of unregulated Grade B manufacturing plants in that two state region. For years, the M-W series was the Class III price. Those markets, however, became very thin with only minimal amounts of milk in the survey. The M-W series was a '*competitive*' pricing series. Prior to FMMO changes taking effect in 2000, milk prices in the U.S. were based on what plants *had* to pay to obtain a supply of milk.³

The switch to multiple component pricing required USDA to survey prices of wholesale dairy products and back-calculate component values (butterfat, protein, other solids) from those surveys. There was a growing movement in the industry at that point in time that pay prices should be based on the value of the components of farm milk. According to University of Wisconsin economist, Dr. Ed Jesse, "Product price formulas generate milk prices that plants *can afford to pay* given reported commodity prices and assumed yields and make allowances." In the short term, these are fundamentally different goals. While pricing based on components may seem rational and equitable, price discovery of these components is easier said than done.

While some improvements in timeliness were made in the transition, end-product pricing has left the U.S. dairy industry scratching its head. Current formulas essentially guarantee returns to processors that produce commoditized products used in the formulas through make allowances. The current yield factors may or may not reflect updated processing technologies that improve plant yields, nor do they account for cost of processing different products. Differentials that reflect adjustments made to formulas to incorporate regional differences in utilization, transportation and cost of production, are quite contentious within and among federal orders. Additionally, the NASS surveys of product prices are highly correlated to prices traded on the CME. There is growing concern that component pricing and end-product price formulas are exacerbating volatility and inhibiting price transparency. Thus, there is a movement within the industry to restore competitive pay prices to the Federal pricing system.

³ Jesse, Ed (2004). "How Have Federal Milk Marketing Order Product Price Formulas Affected Milk Prices? U-W Marketing and Policy Briefing Paper No. 86. http://future.aae.wisc.edu/publications/M_P_86.pdf

The FFF proposal recognizes these concerns and recommends changes to the FMMO pricing system. First, it acknowledges the need to find a true price for milk used in manufacturing and to do so using a competitive market. These changes also reflect growing frustration around the issues mentioned in the previous paragraph. Finally, NMPF's proposed changes are intended to allow innovation in the industry.

First and foremost, FFF retains four classes for milk – I (fluid), II (soft products: yogurt, ice cream, etc.), III (cheese and whey), and IV (butter and powder). Class III milk prices would change to a competitive pay pricing system. Both regulated and unregulated (plants that do not pool) proprietary cheese plants that process a minimum of 500,000 pounds of milk a day would be surveyed for what they pay for producer milk. This survey would encompass plants that produce various types of cheese – not just cheddar. In order to accomplish this, Class III would no longer be a minimum price. Thus, the entire market for milk for cheese will be competitively priced.

Class I prices would continue to be minimum prices based on this new weighted average Class III price with the current county differentials added. The Class II price would also be a minimum price using the new Class III price plus an unspecified differential. Class IV would retain the current minimum end-product price formula; however, it would add an index for energy cost. Two additional stipulations to the program would a) establish the lowest regional competitive Class III price as the pool draw base, and b) establish fund balancing/transportation pools from Class I processors as a result of eliminating the “higher of” portion of the Class I mover.

B. Economic Implications: There is broad consensus along the entire value chain that the current system of milk pricing is not working. Producers are frustrated with the lack of clarity in the formula pricing system and may be willing to move back to a competitive pricing stream. Processors also seem amenable to competitive prices. The first debate with this proposal, which will likely be had by coops and processors, will be the number of classes to price. As the 2012 Farm Bill debate heats up, the general concept of pooling will be a contentious issue.

For a broader context of this policy issue, milk pricing systems around the world vary. For example, the Canadian milk pricing system is highly regulated. The government surveys average costs of production, factors in other indicators and the quota, and sets the price to all producers. However, this is not a market-based price. While European dairy producers operate within a country-based quota system, pay prices are determined by cooperative negotiations with processors. New Zealand and Australia essentially have one cooperative in each country that sets the pay prices for all producers, but these returns are highly dependent on profits from export markets. The U.S. is probably one of the only countries that attempts to regulate milk prices at a national level with a quasi-market system and independent of cooperative returns or performance. Essentially, the U.S. government is a clearinghouse for market information and sets prices based on domestic market values of products. This is probably the world's most complex approach to milk pricing. *(For more information on pricing systems in other countries, see the proceedings of the 17th Annual National Workshop for Dairy Economists and Policy Analysts, April 29-30, 2010 in Denver, CO.⁴)*

Since classified pricing went into place across all orders in the early 2000s, the marketplace has changed. Dairy buyers, which number more than the CCC alone, no longer solely desire commoditized dairy products. International trade has entered the picture. The entire world economy has moved toward

⁴ 17th Annual National Workshop for Dairy Economists and Policy Analysts. Hosted by the Cornell University Program on Dairy Markets and Policy. <http://www.cpdmp.cornell.edu/>

information at a breakneck pace. The Federal Order system and classified pricing has not been able to keep up. While a perfect world would allow us to obtain the value of components in all products and pay producers instantaneously, the system needs to be more nimble, transparent, and responsive to market conditions. Competitive pricing heads in that direction. However, how would the U.S. dairy industry develop a pricing stream that is truly reflective of market conditions and would not disadvantage producers?

If the industry moves to competitive pricing, there are two feasible options for achieving this result. The first is presented in FFF, which includes surveying large regulated and unregulated cheese plants while freeing the Class III market from minimum pricing requirements. Because over 40 percent of U.S. milk is used for cheese production, the competitiveness of the market should keep producer prices stable. The second option is to survey unregulated plants. Because California is a regulated at the state level, it might be difficult to obtain a large enough survey pool. Thus, 'deregulating' Class III may be the most feasible option.

The 2004 Jesse paper compares the current end-product price formulas and classified price equations to those pricing systems since 1991 – the M-W series, the BFP series, and classified formulas that were the precursors to the current ones. Jesse back-casts the formula – the one at the time of publication – to the early 1990s and compares class prices under the new system to the actual class prices in the Chicago order during the time period.⁵ While he finds that producers were no worse off under the current formula system on average, formula prices did a poor job of replicating actual monthly Class prices of milk for Chicago and increased the variability of price differences in nearly all cases. This would indicate that the end-product price formulas did not change price levels all that much but enhanced price variability.

The next milk pricing policy questions will surround the number of classes. Prior to FMMO reform in 2000, there were three classes of milk. When FMMOs began early last century, there were two. The motivation behind price discrimination is that additional returns can be captured by charging different prices for different classes or varieties of virtually the same product (i.e. dairy) because the price elasticities of demand of these products are different. Because fluid milk is supposed to have more inelastic demand (meaning demand for the product does not change much with changes in price), consumers will maintain fairly constant levels of consumption of fluid milk when it is at high and, conversely, low prices. In a recent report entitled, *Dairy Policy Issues for the 2012 Farm Bill*,⁶ U-W Madison and FAPRI economists contend that these elasticities should be constantly analyzed, as markets and product demand can change.

When FMMOs were establishing classified pricing, the second class was for manufacturing and included milk used for all other dairy products. An additional class was added for soft products that were more perishable, like yogurt and ice cream – currently called Class II. Class III products included butter and powder, which were commonly used to balance excess milk during peak production seasons as a residual use. Many of the coops owned these plants and pushed for a separate butter/powder class during FMMO reform in the late 1990s, so all producers would share in the balancing costs.

⁶ University of Wisconsin and FAPRI. Dairy Issues for the 2012 Farm Bill. (April 2010)
http://future.aae.wisc.edu/alliance/2012/Dairy_Policy_Issues_April2010.pdf

At least two classes seem absolutely necessary – fluid and manufacturing. The same report mentions having a price for Class II does not add much to producer revenue because it is set at \$0.70/cwt. above the Class IV advanced price. U-W and FAPRI economists say a way to merge Classes II, III, and IV, would be to simply compensate coops that perform balancing functions from the FMMO pool rather than having a separate class for butter and powder. Removing Class IV pricing might assist the industry innovation for milk powders. Following the New Zealand export model, the fastest increasing market for dairy is in specialty milk powders. Maintaining a minimum Class IV pricing formula likely will not motivate current NFDN plants to innovate for export opportunities. However, an inherent problem in including Class IV into a manufacturing price is the vast amount of unregulated or state-regulated NFDN production. About half of all NFDN production is from California. Regulated and unregulated markets for milk powders are closely aligned.

To conclude, competitive pricing is a step in the right direction for the industry. Tying Class I to a competitive Class III price with current differentials will also add *stability* – not necessarily increases – to producer prices. At this juncture it is probably politically unfeasible to completely deregulate Class I prices. The approach to surveying price is sound; however, more details on how the weighted averages will be calculated will be necessary. Maintaining separate price classes for II and IV may not allow for necessary innovation in the industry. Some have suggested consolidation of orders and bringing non-regulated areas into the Federal pool. This proposal does not go in either of those directions.

6) Overall Program Comments

Under current policy, AFBF could support certain elements of FFF. Current policy does not support eliminating the Dairy Price Support Program, but it would allow for support of the DPMPP. Certainly, the DPMPP is more market-oriented than the current suite of programs. Overall, the organization is supportive of insurance initiatives as a way to manage risk, and, at its core, the DPMSP includes a counter-cyclical income assistance component in the base program. Current AFBF policy also opposes a mandatory supply management program. The policy supports CWT and a reform of FMMOs.

Some other ideas to consider:

- ❖ Make the overall program (not including FMMO changes) voluntary. Producers would elect to participate in order to obtain the DPMPP protection and then be part of the DMSPP provisions, or they could opt to be completely at the market with no support from the DPMPP and no restrictions from DMSPP.**
- ❖ As structured, the base margin protection provisions of the DPMPP are totally supported by the government. This program is similar to catastrophic crop insurance and the Noninsured Assistance Program (NAP). Both of these programs charge administrative fees of \$250 to \$300 per policy. Are there advantages to having producers put some money in the game for the base program?
- ❖ CBO's score of the program will be critical, however, there should be sufficient room in the baseline for the base program and at least some funds left for the buy-up provisions. Should we consider using the funds generated by the DMSPP to help producers pay for the buy-up coverage and reduce their premiums rather than funding additional programs to provide assistance to food banks and school lunch programs?

- ❖ AFBF policy is open-ended on reforms to milk pricing. It does not specifically support competitive pay prices; however, it does support price changes that would add transparency to the marketplace. At the current time, competitive pay prices are the best option to achieve that goal. However, maintaining the four class system may not reflect current market conditions or an export-oriented philosophy.

While current AFBF policy opposes supply management, it is important to note that the DMSP program is easily the least prohibitive and most market-oriented of all proposed supply management programs. There seems to be critical mass among coop groups for a production control strategy. If this program was instituted at the coop level, like CWT, the industry would own the program, thus making it voluntary. Despite the criticism of voluntary approaches to managing supplies, CWT worked well under the circumstances to reduce supplies in 2008 and 2009. The reason it worked was because it was an industry-driven program, not a government driven one.

***Should an option be to consider exempting producers who do not sign up for the DPMPP from being required to participate in the supply management program? Under that scenario a producer has the opportunity to opt out of the supply control program, but he/she would have a very different risk picture. These producers would essentially be cut free from all federal dairy programs except classified pricing and marketing orders. This likely would fit the voluntary selection criteria.*

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Lines 2-5 [We support:] (1) A market-oriented national dairy program that includes a national counter-cyclical income assistance component, such as the Milk Income Loss Contract (MILC) program, which is consistent with a worldwide fair and open trade policy;

Line 3 [We support] (3) Continuation of the dairy price support program.

Lines 9-13 [We support] (4) Modifications in the Federal Milk Marketing Order structure, formulas and price classes used to compute milk prices in order to better reflect current market conditions and enhance transparency and take into account the regional differences in the cost of milk production;

Lines 29-30 [We support] (10) Any changes needed to facilitate the long-term development of value-added products;

Line 54 [We support] (21) A price discovery method which utilizes more milk.

Lines 62-63 [We support] (24) An increased effort by the dairy industry to develop domestic and foreign markets;

Line 81 [We oppose] (1) A mandatory supply management program;

Line 85 [We oppose] (4) Discrimination against large producers in the MILC program.