US Department of Agriculture
Dairy Industry Advisory Committee **Final Report**

January 2010

Recommendations for Public Policy to Improve Dairy Farm Profitability and Reduce Milk Price Volatility

Forward

The United States Department of Agriculture (USDA) established the Dairy Industry Advisory Committee in August 2009, under the rules of the Federal Advisory Committee Act (FACA). Agriculture Secretary Tom Vilsack appointed 17 members to serve on the Dairy Industry Advisory Committee on 6 January 2010.

Its Charter directs the Committee "to review the issues of: 1) farm milk price volatility and 2) dairy farmer profitability. The Committee will also provide suggestions and ideas to the Secretary on how USDA can best address these issues to meet the dairy industry's needs." The Charter further explains, "the exchange of views and information between industry representatives and USDA should result in improved understanding of the impact of USDA programs on the dairy industry and contribute to those programs' effective and efficient administration."

In accord with the requirements of FACA, the Committee Bylaws state that "Members will be selected from a cross section of the dairy industry representing: producers and producer organizations, processors and processor organizations, handlers, academia, retailers, consumers, and state agencies involved in organic and non-organic dairy at the local, regional, national and international levels." Individuals serving on the Dairy Industry Advisory Committee are as follows1:

1 All members except Dr. Novakovic are considered under FACA to be serving as Representative Members and are appointed to obtain the perspectives of public sector stakeholders. Dr. Novakovic serves as a Special Government Employee under appointment by Secretary Vilsack.

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Members	Affiliation
Paul Bourbeau	Paboco Farms, Inc., Vermont
Jay Bryant	Maryland and Virginia Milk Producers Cooperative Association, Virginia
Erick Coolidge	Le-MA-Ra Farm, Pennsylvania
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Executive Summary

In 2009 dairy farmers suffered the joint effects of a cyclical downturn in milk prices, elevated input costs, and a severe recession that impacted both domestic and international demand. The federal government has a number of programs in place to intervene when prices fall to low levels. The Dairy Product Price Support Program (DPPSP), for example, is designed to prevent wholesale and farm prices from falling below a certain level. The Milk Income Loss Contract (MILC) is designed similarly to the countercyclical payments used for many other agricultural crops and provides a cash income supplement to partially offset the impact of low prices. In this context, Federal Milk Marketing Orders (FMMOs), the third major dairy specific program, are designed more for longer-term regulation of markets and have no specific tools or purpose applicable to shorter-term price events.

During 2009, MILC income supplements were triggered from February through November 2009. Just short of $1 billion was spent on MILC in the two fiscal years from October 2008 to September 2010. The Agricultural Appropriations bill for FY2011 also provided an additional $290 million to distribute as direct payments to farmers through the Dairy Economic Loss Assistance Payment (DELAP) Program. Surplus butter and nonfat dry milk was sold to the government, at supported price levels, under the DPPSP as well. In FY2009, the amount of butter sold equated to 10% of the milkfat contained in all dairy products sold commercially. The corresponding value for nonfat solids was 17%. For the fiscal years ending in 2009 and 2010, nearly $300 million was spent to acquire surplus dairy products under the DPPSP. The 2010 Agricultural Appropriations bill also included $60 million for purchases of cheese products to be used in The Emergency Food Assistance Program.

In addition to these core dairy programs, $108.6 million was used in direct loans to dairy farmers through the Farm Loan Program and significant loan guarantees, concessions and options for restructuring, rescheduling or deferring payments on existing FLP loans. The maximum allocations of export subsidies provided under the Dairy Export Incentive Program were made, in accord with international trade agreements.

Hence, existing programs were implemented and even augmented in 2009 and 2010. They had some effect, but they were unable to prevent 2009 from being the worst year for dairy farm profitability in decades.

The Committee's review reveals that the federal government has limited ability to respond to such events under existing legislation. Some laws provide no leeway to the Secretary of Agriculture, others allow some or even considerable discretion. When a Secretary's proposed action has or is likely to have an impact on government expenditures, even "discretionary" programs cannot be used without approval of the Office of Management and Budget.

The Dairy Industry Advisory Committee recognizes that the Secretary must apply all of these approaches judiciously as government interventions have the potential to displace commercial sales, disrupt existing dairy product markets and delay price recovery. However, economic conditions such as those felt by dairy farmers in 2009 that result from unanticipated economic shocks justify intervention. Therefore, the Committee has reviewed existing authorities and provides recommendations for how the Secretary could use those authorities most effectively to improve dairy farm profitability and reduce farm margin volatility.

If the Secretary can identify funding sources, he can use the Dairy Product Price Support Program and one or more food assistance programs to stimulate demand and lift prices. The Dairy Industry Advisory Committee suggests guidelines for use of these programs.

Allocating part of the U.S. government's budget to dairy farm programs necessarily involves tradeoffs with other programs. The Committee suggests that using objective measures of sector hardship can reduce political pressures in the allocation process. **The DIAC recommends that the Secretary implement trigger levels based on the difference between average milk prices and some index of feed costs. The Secretary can demonstrate objectively that dairy farmers face extreme hardship when the difference between revenue and cost falls below specific trigger levels. That would justify shifting resources from other uses that may not be as critical. Within this framework, the first trigger indicates that a food assistance program could be used to increase the demand for dairy products. At the second trigger, the DPPSP purchase prices should be raised. The committee recommends caution in application of these responses.**

The Dairy Industry Advisory Committee also recommends that the Secretary of Agriculture review program administration to examine its impact on creating price volatility or delaying the government's response. In particular, the Dairy Product Price Support Program seems to operate with considerable delay and provides price support below the intended levels. Testimony before the

Committee indicated that administration of the Federal Milk Market Order system is inflexible and outdated. Moreover, the Market Order rules may be effectively transferring volatility in narrow subsectors of the dairy market into wider milk prices. Some changes in administration of these programs are within the authority of the Secretary of Agriculture.

Numerous proposals to create a more effective safety net for dairy farmers have been offered by various groups and organizations. Although the next omnibus Farm Bill is not due until the end of 2012, there have been proposals to accelerate the timetable for reviewing Farm Bill programs or to separately introduce dairy specific legislation. The Secretary of Agriculture appointed a Dairy Industry Advisory Committee (DIAC) to assist him in understanding the effectiveness of existing programs and how they might be improved or replaced to better address problems related to dairy farm profitability and milk price volatility.

The DIAC has exhaustively reviewed existing programs, both dairy specific and dairy related, to determine what the Secretary of Agriculture is able to do without new legislative authority and the degree of flexibility he has to take action based on either the structure of the law or the availability of funds. It has also reviewed and considered alternative actions that would require new legislation or regulation. In so doing, it has been guided by the charge from the Secretary to focus attention on dairy farm profitability and milk price volatility. Other economic issues are certainly important, such as the availability of an adequate and affordable supply of dairy products, expansion of markets, profitability down the supply chain, competitiveness in dairy markets, and so on. To the extent such issues relate to the key profitability and volatility charge to the committee, they were given some consideration; however, they were not the focus of the committee's attention, per se.

Including recommendations related to existing programs, 22 recommendations are made by the DIAC, as follows:

NUMBER	RECOMMENDATION
EXISTING PROGRAMS AND AUTHORITIES	
1	The Secretary should develop and implement trigger levels based on the difference between average milk prices and some index of feed costs. The Secretary can demonstrate objectively that dairy farmers face extreme hardship when the difference between revenue and cost falls below the trigger levels. That would justify shifting resources from other uses that may not be as critical under the circumstances. Within this framework, the first action would be to allocate additional funding to food assistance programs for the purchase of dairy products. At the second trigger, the DPPSP purchase prices should be raised.
2	The Dairy Industry Advisory Committee also recommends that the Secretary of Agriculture review program administration to examine its impact on creating price volatility or delaying the government's response. In particular, the Dairy Product Price Support Program seems to operate with considerable delay and provides price support below the intended levels. Testimony before the Committee indicated that administration of the Federal Milk Market Order system is inflexible and outdated. Moreover, the Market Order rules may be effectively transferring volatility in narrow subsectors of the dairy market into wider milk prices.
PRICE PROTECTION, STABILIZATION AND REGULATION	
3	REVIEW FEDERAL MILK MARKETING ORDERS. The Secretary of Agriculture should appoint a committee to review implications of Federal Milk Marketing Orders, including their implications on volatility, inefficiency, and dairy farmer profitability, and to recommend reforms.
4	STRONGLY CONSIDER THE ELIMINATION OF END PRODUCT PRICING. Alternative measures to current end product pricing system such as, competitive pricing, mandatory price reporting, etc. should be explored.
5	EXPLORE ELIMINATION OF THE DAIRY PRODUCT PRICE SUPPORT PROGRAM AND THE DAIRY EXPORT INCENTIVE PROGRAM AND USE BUDGET SAVINGS TO ENHANCE THE SAFETY NET FOR PRODUCERS.
6	COLLECT AND PUBLISH PRICE DATA. USDA should collect and publish data on alternative measures of a competitive pay price, considering but not limited to the proposals of the National Milk Producer Federation and Maine Dairy Industry Association.
7	ADOPT A GROWTH MANAGEMENT PROGRAM. The federal government should adopt a growth management program that allows new producers to enter and allows producers to expand production.
INCOME PROTECTION AND STABILIZATION	
8	SIMPLIFY AND IMPROVE RISK MANAGEMENT PRODUCTS FOR DAIRY FARMERS. USDA should continue to simplify and improve Livestock Gross Margin-Dairy and Adjusted Gross Revenue-Lite in order to make them more accessible and easier for dairy farmers to use and adapt Livestock Risk Protection for use by dairy farmers. Risk management education should be expanded.
9	ESTABLISH RISK MANAGEMENT MARGIN LINES OF CREDIT. A USDA based credit mechanism (direct lending or credit guarantee) for first buyers of milk (cooperative or proprietary) to cover the margin deposits required on contracts for risk management

	between first buyers and producers of raw milk should be developed.
10	ADOPT TAX-DEFERRED FARM SAVINGS ACCOUNTS. Dairy farm operators should have special savings accounts available with no government match for contributions, no limit of dollars deferred per year, the requirement that money must remain in an account a minimum of six months with withdrawal at account-holders discretion thereafter. Payment of taxes on contributions and interest would occur upon withdrawal.
11	MODIFY MILK INCOME LOSS CONTRACT PROGRAM AND PROVIDE A MARGIN INSURANCE OPTION using funds from the elimination of the DPPSP. We recommend the continuation of MILC, with a production cap based on available funds, with two important modifications: (1) use an all-milk income/feed cost margin trigger, and (2) provide an insurance program for production excluded by the cap to provide protection for larger producers.
PROFITABILITY AND MARKET IMPROVEMENT	
12	MAINTAIN AND EXPAND PROGRAMS FOR EXPORT MARKET DEVELOPMENT. Programs like the Market Access Program and the Foreign Market Development Program should be continued and expanded.
13	LOWER SOMATIC CELL COUNT LIMIT FOR GRADE A MILK. We recommend that the Secretary of Agriculture support the adoption of a maximum somatic cell count of Grade A milk in the amount of 400,000 cells per milliliter at the farm level at the Interstate Milk Shippers Conference. The implementation should occur over a period of time not to exceed 48 months.
14	RESTRICT USE OF DAIRY DESCRIPTORS ON PRODUCT LABELS. We recommend that USDA support restriction of dairy descriptors, including terms such as milk, cheese, yogurt, butter, for use on products made from milk.
15	PROVIDE INCENTIVE PAYMENTS FOR ENVIRONMENTAL PRACTICES. The Secretary of Agriculture should increase the amount of money available for incentive payments to dairy farmers for environmental practices that address social, economic and environmental benefits to dairy farm communities.
16	PHASE OUT ETHANOL SUBSIDIES. We support the rapid phase out of the blender's credit and tariff on imported ethanol.
17	CONTINUE THE EQIP AND GRANT PROGRAMS. The EQIP program should be continued, and dairy farmers should be given preference in grant programs for implementation of energy audits, infrastructure development for value-added processing and distribution facilities, construction of facilities to meet food safety regulations and farmland protection, and to allow beginning farmer loans for farm transfers between generations.
18	SUPPORT FOR VALUE-ADDED DAIRY. We recommend that the Secretary of Agriculture support programs that enhance value-added market development for dairy farms and dairy products. Opportunities should be explored including, but not limited to, the development of educational training programs and technical assistance for farms, inspectors, and regulatory personnel to accommodate unique value-added dairy farm operations. A study should be made to examine the impact of user fees on value-added dairy product operations.
19	DEVELOP A SYSTEM THAT PROVIDES AN ACCURATE ASSESSMENT OF PROFITABILITY IN THE DAIRY INDUSTRY. A data gathering and reporting system should be developed that expresses farm profitability in the dairy industry using an index to

	provide an impartial overview of the general level of profitability at the farm level based on the milk price-feed cost margin.
20	ADOPT CALIFORNIA MILK SOLIDS STANDARDS FOR FLUID MILK.

The remainder of this report has three main sections. In the first, the justification for existing and new dairy policy is reviewed, especially in the light of the Committee's charge to focus on dairy farm profitability and milk price volatility. In the second section, existing programs, laws and authorities are discussed, with an emphasis on how they might be best deployed to benefit the dairy sector in times of economic distress. In the third section, proposals and recommendations for modifications to existing programs or the creation of new programs are reviewed and discussed.

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Introduction

With the ink barely dry on the 2008 Farm Bill, the U.S. economy descended into the worst recession since the Great Depression of the 1930s. The dairy industry suffered a combination of recession-driven demand effects and more sector-specific supply effects. Dairy exports, which had been a primary cause of dairy farm prosperity in 2007 and 2008, collapsed as global demand declined. Domestic demand, especially in foodservice, also shrank as consumers trimmed household budgets. On the supply side, the costs of feed, the single largest input into milk production, hit record highs. This in turn created the worst price: cost squeeze since the early 1970s. While the industry was poised for a cyclical downturn in any event, the global economic downturn, in combination with record grain prices, pushed most dairy farm businesses into the red and eliminated years of growth in dairy farm balance sheets.

Although net income for dairy farmers improved in 2010, weakened balance sheets leave farmers vulnerable in the current economic environment. During late Fall 2010, futures markets for the first half of 2011 showed significant declines in prices for milk and increases in corn and other feeds. The implication for dairy farm margins is that they will not be as poor as in 2009 but they will be among the lowest levels of the last decade. Inasmuch as dairy farmers have much less capacity to absorb the anticipated shock, this raises serious concern about the economic stress that dairy farmers are and will be experiencing in the near term. This is in stark contrast to the much more positive and bullish outlook enjoyed in most of the rest of agriculture, in particular for feed and food grains.

This report reviews current and possible new federal laws and programs intended to assist dairy farmers and discusses their potential application and impacts in various market environments. Milk and dairy product markets are a complex web of activities and businesses that begins with industries that provide products and services to dairy farmers and ends with consumers of dairy products and food and other products that have significant dairy ingredients. The structure of this value chain and the performance of the various businesses and individuals that span the chain are all worthy of consideration when pondering dairy policy. This report will attempt to highlight significant implications or considerations along the entirety of the supply chain, but our focus is defined by the Secretary's charge to his Committee. That is, the focus will be on the twin issues of milk price volatility and dairy farm profitability.

Milk Price Volatility

A Working Definition of Price Volatility

Particularly since the collapse of prices in 2009, it has become quite common to hear milk prices be described as "volatile". The image this connotes is clearly negative, but the term does not have a clear and universal definition. For our purposes, we define price volatility using the following logic and rationale.

Prices can be considered to have three fundamental dynamic characteristics. They may be certain or uncertain, stable or unstable, adequate or inadequate.

Certainty simply means that a future price is predictable. The more confident one can be in the prediction and the farther out one can make a prediction, the greater the degree of certainty. Certainty can be measured by the difference between the future price one expects days, weeks, months, or years in advance, and the actual price that is realized.

Stability refers to how much price changes over time. This involves the frequency of change and the amplitude of change. A price that never changes is both stable and predictable, but otherwise the two concepts are independent. A highly seasonal price pattern, for example, might be quite predictable while still being "unstable". Stability can be measured statistically in several ways. Standard deviation, variance, or coefficient of variation measures the "dispersion" of a price series – the amplitude of price changes over time. Other measures, such as log relative variability, measure the frequency of change.

Adequacy is a more subjective assessment, but it gets at the notion of whether a price returns positive net revenue to the seller. As a short run measure, one might think of an adequate price as one that results in a cash flow coverage ratio greater than 1. This simply means that farmers have the ability to pay all their operating expenses, make debt payments, and cover family living expenses from operating income and interest earnings.

With this in mind, the following definition or description of volatility is used to consider and evaluate policy solutions to the problem of volatility. Price volatility is a pattern of prices over time that is characterized by prices that are highly unpredictable, unstable, and inadequate to severely inadequate on the downside of its cycle. This, of course, does not preclude the possibility of prices being very advantageous to a seller on the upside.

Causes of Price Volatility in the Dairy Sector

Before the Agricultural Act of 1949 established the Dairy Price Support Program (DPSP), farm milk prices exhibited a high degree of instability. Indeed, the relative spread from high to low was generally as greater or greater than the dispersion in milk prices known today. This instability had its effects, but these fluctuations were primarily seasonal and generally predictable.

From 1950 to 1989, milk price variability was considerably dampened compared to the first half of the Twentieth Century. During the 1970s, the primary price mover was inflation, which affected the entire U.S. economy. From 1981 to 1990, dairy markets were characterized by a variety of significant government programs, including large product purchases and herd buyouts, to offset surpluses generated by aggressive support price policies in the late 1970s. Beginning in 1980, the support price (for milk used in manufacturing) was gradually reduced from over $13.00 per cwt. to under $10.00. At the current level of support, government purchases have been infrequent. While there clearly were price issues in the 1970s and 1980s, volatility would probably not be the word used to describe them, certainly not as it is defined for the purpose of this report.

Since 1990, the farm milk price has become highly variable and unpredictable. The causes of this increased volatility are debatable but likely involve both policy or regulatory issues and economic factors internal to the industry.

As a policy matter, the reduction of the federal support price for milk during the 1980s revealed an underlying volatility or susceptibility to volatility. Additional dairy policy changes of 2000 and 2002 exacerbated the effect of minimal price support.

Price volatility in the last decade also corresponds to two significant changes in administration of federal dairy programs. The base price for Federal Milk Marketing Order formulas was changed from a competitive pay price survey of prices paid a subset of dairy farmers by otherwise unregulated plants (the M-W price and then the so-called BFP) to class prices derived from the wholesale prices of certain dairy commodities (product price formulas). This had the effect of directly tying farm price volatility to the volatility of wholesale prices for dairy commodities, which had always been more volatile than the previous competitive pay price series. The switch to a product formula price occurred in 2000. Another factor, occurring with the passage of the 2002 Farm Bill, was the conversion of the Dairy Price Support Program (DPSP) to the Dairy Product Price Support Program (DPPSP). This latter change was quite

subtle, but in both these cases, the new programs were tied to narrowly defined product categories that experienced more price volatility than the market as a whole.

Another significant policy event that seems have changed dairy markets was the conclusion of the Uruguay Round negotiations under the General Agreement on Tariffs and Trade, now referred to as the World Trade Organization (WTO). In the U.S., the Uruguay Round Agreements Act was passed in 1994. Under the Agreement on Agriculture (AoA), the United States agreed to unrestricted access to its dairy markets by foreign competitors equal to about five percent of total US sales (this roughly doubled US imports from about 2.5 percent to five percent). Above this level, the United States also replaced its strict import quota system with a tariff-based system that generally provided a high degree of protection from most dairy commodities but greater access to value added products (such as European-style cheeses). In exchange for increasing access for imports, the United States dairy industry got greater access to foreign markets. Increased trade subjected U.S. dairy markets to the effects of changes in world supply and demand conditions, including weather, political shocks, and foreign food safety issues. These probably contributed to increased price instability.

The somewhat unusual position of the US among world dairy product traders may be a compounding factor. The US is among the largest producers of milk and milk products in the world. Its cost structure puts it in the rather unusual position of being either a potential net importer or net exporter. The US tends to purchase high value cheeses and other specialized products and sell low value commodities, especially dry powders. As such, the US has tended to be a net importer on a dollar value basis since the Uruguay Round agreement, but on a milk equivalent basis it has occasionally been a net exporter. Periods of net export have been the result of a combination of factors, including strong world demand, weak supplies by more consistent exporters, and favorable exchange rates. While the US is hardly unique in being susceptible to swings in world markets, its vacillation between being a net importer or net exporter is unusual and perhaps puts it in a more volatile position.

Another policy element that may contribute to persistence in dairy farming despite economic stress is the pooling of returns under federal (and state) milk marketing orders. Marketwide pools, which have been the norm for milk pricing for the last century or so, is a system of average pricing whereby cooperatives or individual farmers sell milk to processors who pay quite different prices that are based on classes of use, but farmers receive a weighted average of the combined returns. While useful in ensuring

that farmers do not destructively compete with one another for the highest valued market, pooling necessarily mutes individual price signals that would otherwise discourage individual producers or suppliers facing a down market or subsector.

Although not a matter of public policy per se, a related element is that the vast majority of the milk marketed in the U.S. is marketed via cooperatives, and the cooperative business model has long been to accept responsibility to market whatever volume of milk a producer chooses or is able to produce. In periods of stress, when markets are long, there is essentially no marketing risk for a producer, in the sense that every pound of milk will produced will be purchased. Of course, cooperatives cannot simultaneously agree to market every pound of milk and guarantee a favorable price. Prices must be able to adjust to clear the market. Pooling combined with the essentially unlimited cooperative guarantee to purchase all milk produced are likely to exacerbate price volatility because they tend to delay production adjustments in the fact of low prices. This marketing and pricing system has been in place for about one century; hence, modern price volatility cannot be blamed on pooling and market security, but those two elements likely do confound the ability of the marketplace to react to volatility caused by other factors.

In terms of the internal economics of the sector, dairy analysts have described dairy markets as having low price elasticities of supply and demand for farm level milk, and inelastic price elasticity of demand for many dairy products throughout the market chain. While analysts debate the degree of elasticity, most agree that short-term elasticities are small. As such, small relative changes in quantities are associated with relatively large changes in price. This has always been true for dairy markets, and some have argued that it is less true today. Regardless, the reduction in price support exposes the industry to this kind of volatility to a much greater extent than was true when the DPSP was more important in establishing market prices. To the extent that product formula pricing reduces incentives for suppliers to move milk to higher valued uses, the volatility enhancing aspects of product supply and demand inelasticities may be further aggravated.

One, and perhaps the greatest, reason for the high degree of milk supply elasticity is that dairy farming is a production activity that is characterized by a high degree of asset fixity. An operating farm will endure a great deal of short term stress (negative cash flow) as long as the operator believes that the farm will be profitable in the long term and sufficient credit or reserves exist to get through the negative period. Moreover, the generally high degree of fixed costs and the fact that cows are not machines that

can be simply turned off means that it generally makes sense in the short term to produce at full capacity. Thus, in periods of declining prices, farmers logically will continue to produce until they decide to go out of business or someone decides that for them.

Productivity gains in dairy production are another factor. Milk production per cow has increased at an incredibly steady and predictable annual rate of 271 pounds per year since 1953. In 1971, the U.S. average cow produced just over 10,000 pounds of milk per year. This amount was doubled in 2007. This productivity growth is the primary reason why milk prices have not increased with inflation even as total milk production increased 57% over the same period. While this is uniformly good news for dairy product consumers, it presents both challenge and opportunity to dairy farmers. Although many dairy technologies and management techniques are size neutral, the causes of these productivity gains often involve capital investment, either directly or indirectly, and there are some advantages to scale. Moreover, for whatever reason, some farmers are more aggressive and/or successful in adopting new technologies and management techniques. Thus, this persistent productivity growth is not experienced uniformly across farmers. In times of economic stress, some farms are much more stressed than others are. Volatility creates a condition in which higher cost farmers are more susceptible to failure. From 1971 to 2007, the number of farm operations that milk cows fell from 591,870 to 69,995. The annual percentage of farms exiting from 1991 to 2007 is actually a full point greater than the average annual percentage of farms exiting from 1977 to 1983, when milk prices were increasing to stable.

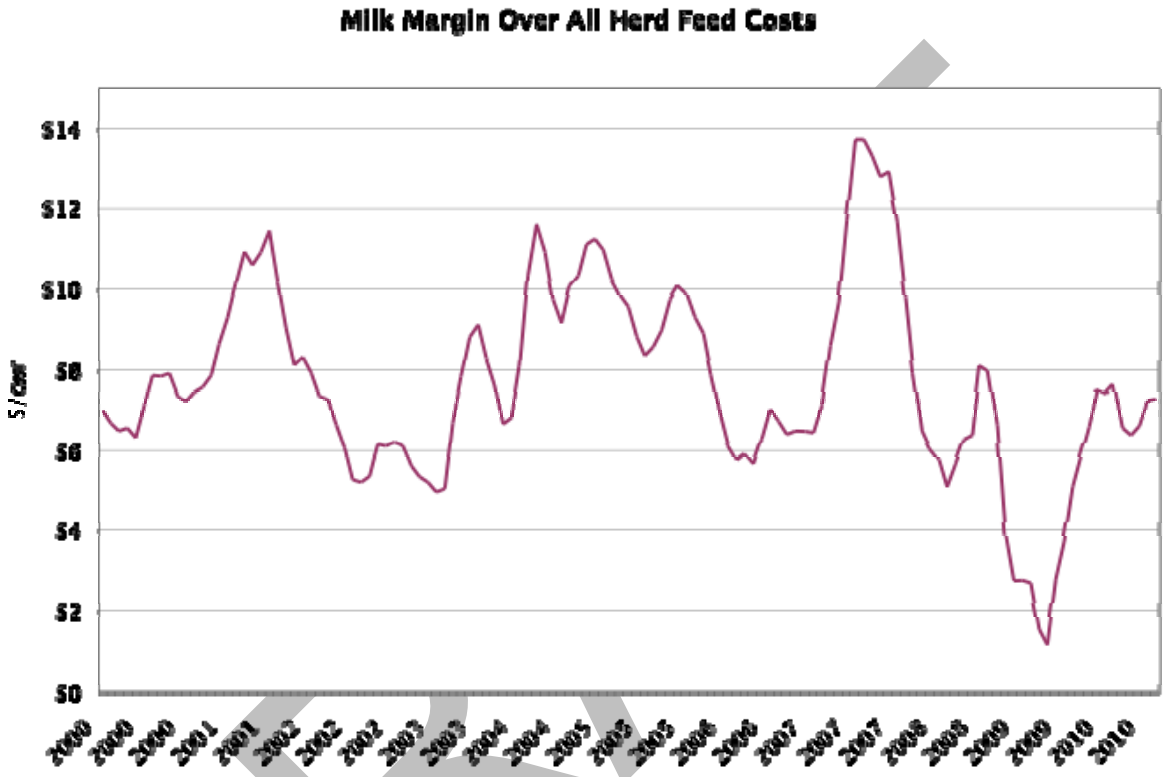
Dairy Farm Profitability

In addition to swings in milk price, dairy farmers have experienced significant changes in prices of inputs used in production, in particular feeds. The single largest milk production cost component (40-50%) is the cost of feed. Thus, dairy farmers are especially sensitive to the prices of purchased feeds or to the prices of inputs used in homegrown feed production. Key feedstuffs include corn, soybean meal, and alfalfa hay. Other important production inputs are energy and labor and—for those who grow their own feed—fuel, fertilizer and seed.

From Fall 2006 through Summer 2008, the price that corn growers received increased from about $2.00 to about $5.50 per bushel. The increase in soybean prices was equally dramatic. Among the causes of feed price increases, expanded bio-fuel production created a large and new demand for corn and, because of acreage competition, contributed to the price increase for soybeans and other crops. Weather

and international grain demand also contributed to high feed costs. Milk prices had hit a cyclical low in 2006. The high feed costs that decreased milk supply and the price of milk rose from a low of$11.70 per cwt. in July 2006 to a high of $21.90 in November 2007—the all time record high for the nominal price of milk. In the early months of 2007, the rise in the price of milk did not keep pace with increases in feed costs. At the peak of the market, farm prices were more than enough to compensate for high feed costs, net returns were generous, and farmers increased milk production. By the end of 2008 and through 2009, the farm profitability equation had again turned against dairy farmers. Although corn prices and other input prices had softened from their highs due to record crop production, milk prices had fallen even more. The problem in 2009 was not just the price of milk, which was no lower than at the

bottoms of the previous two cycles, but the unprecedented low to negative margins. In many months, the milk check barely covered the cost of feed. This is illustrated in the following chart.2



Clearly, the low point in Milk Margin over Feed Costs ($/cwt.) during 2009 is far lower compared to the previous troughs in 2006 and 2002 although milk prices were approximately the same in the three years. The distinction between prices and margins is important. Prices influence margins and financial outcomes, but output price alone does not determine farmers' well-being. Most dairy and other agricultural support programs are based on or triggered by an output price, such as milk price. The

2 This chart uses a margin methodology developed by the National Milk Producer's Federation in its Foundation for the Future proposal. There are several ways to measure margins or other indicators of the relationship between the price of milk and the prices or costs of feed, or farm returns more generally. The methodology proposed by NMPF is reasonable and follows months of careful consideration on their part. In using it in this paper, we do not imply a formal endorsement of their methodology.

usefulness of that simple approach, which seemed to work satisfactorily in the past, has been seriously challenged by the events of the last two years and is a concern looking forward to 2011 and beyond.

Although most farmers would continue to advocate for a policy of fair milk prices, the experience of 2009 has very much sensitized industry members and analysts to the fact that a milk price that looks good to high by purely historical comparisons can easily be inadequate when input prices are high. This has caused much attention to be focused on alternative measures of profitability in dairy farming.

Measures of Profitability

Below are some common measures of dairy farm profitability:

A. **Cash flow Coverage (Liquidity):** Cash flow coverage ratio is the ratio of net cash income to planned debt service payments, or one's ability to pay with what one wants to pay. A ratio of 1 or greater simply means that the farm business can pay its operating and family living expenses from the cash income it earns from operations plus simple interest payments and still cover its planned debt payments. Cash flow coverage is a measure of solvency more than a measure of profitability, in the strict economic or accounting sense. It is useful in that it is simple and easy to calculate, and it is a useful measure of short-term survival. The ability to achieve a Cash flow coverage ration can vary dramatically from farm to farm even when basic output and input prices are similar because of differences in debt structure or family living expenses.

B. **Milk to Feed Price Ratio:** One way to compare output and input prices is to calculate them as a ration. The milk: feed price ratio typically uses an average price received for milk divided by a weighted average price of key feeds, commonly corn, soybeans or soybean meal and alfalfa hay. This ratio has been used in national reporting as an indicator of dairy farm economic conditions for decades. Benchmarks were developed using this ratio to define values that could be described as good or bad or expansionary vs. contractionary. As the industry began to experience far larger swings in both output and input prices, the meaning of these ratios clearly were distorted when prices were at extremes.

C. **Milk Margin over Feed Costs:** Prices are not the same as costs. Costs are measured in terms of dollars per unit of output (e.g. $/cwt. of milk) and are calculated from the price of an input and the amount of that input used to produce a unit of output. Because they involve the amount of input

purchased and used, the price of an input can rise (or fall) while the cost of the input in producing milk decreases (or increases). The margin measurement attempts to correct for the flaw in the Milk: Feed price ration precisely by taking into account changes in input usage and recognizing that a ratio for a low price may not generate sufficient margin dollars to result in positive cash flow or adequate cash to cover family or operating expenses. The margin calculation is not quite as easy as calculating a simple price ratio but it is a fairly simple and effective measurement of economic results on dairy farms. Of course, if costs of non-feed inputs are increasing dramatically, say for labor, then what might otherwise seem an adequate margin may not be adequate at all. In addition, the fact that costs of production vary widely by type of production system, region of the country, management style, the life cycle of the farm business, and so on, a favorable national average Margin doesn't guarantee that all farmers are in a favorable position. The Margin calculation is arguably best suited for traditional confinement herds that purchase their feed, but it may not translate well for dairies that produce their own forage, have significant feed from grazing, or that earn a value-added price for their milk. Advocates of using a Milk Margin over Feed Cost benchmark for evaluation and dairy policy purposes argue that costs of homegrown feed tend to correlate with costs of purchased feed, but recent experience strongly indicates that this is not likely to be the case when purchased feed prices fluctuate widely, even though it is likely true over a longer time horizon.

D. **Adjusted Gross Margin** (adjusted Gross Margin/cwt.: Milk income less Cost Of Goods (COGs) less non-milk income) – Gives a measure of what the margins, or returns over variable costs are. It takes debt structure and leveraging out of the equation, and provides a snapshot of how the dairy farm is performing. It can capture the Cost of Production (COP) per hundred pounds of milk or how many cows are producing how many hundred weights of milk. More cows will mean more gross income but the expansion may mean more investment and perhaps lower net income.

E. **Return on Assets (ROA) and a Return on Equity (ROE):** Equity is what is owned by the farmer and is calculated by: Assets - Debt = Owner's equity. ROE is calculated as net income divided by the producer's equity. ROA divides average farm assets by net farm revenue. Farm assets are typically calculated as the average of beginning and ending assets for a period, say one year. Net farm revenue typically takes into account a charge for family living (unpaid family labor and management), accrual adjustments on livestock and feed inventories, accounts

receivable, accounts payable, changes in supplies and prepaid accounts, and interest or the rental value on unpaid assets.

F. **Rate of return on assets**: Another indication of profitability when looking at return on assets is for assets to "turn" in 2.5 years. This refers to the gross income generated over a period of time compared to dollars invested. If a dairy farm has $1,000,000 invested, it needs to generate $400,000 of gross income each year in order to achieve a turn of 2.5 (2.5 years of net income to equal investment.) If a 2.5 turn cannot be achieved, there is either too much invested, not enough income being generated, or the milk price has gotten too low to generate the anticipated income. One of the challenges of using the balance sheet to assess profitability is that many dairies have seen their net worth rise only because their land values appreciated. This looks good (or bad when values drop) on paper but it is not "earned income" or liquid income.

G. **Supply and Efficiency:** If there is enough milk supply dairy farms are profitable and the most efficient will be profitable. With a surplus, prices will remain low until enough cows and operations leave the industry or the world market improves.

H. **Lifestyle supported by a second income:** The biggest growth in livestock farmers is those who have a second income from investments, retirement money, the spouse's job or part-time work. These farmers, often first-time or new generation, are looking to cover costs and perhaps pay the taxes from farm operations, and their assessment of profitability is based more on lifestyle than supporting their family full-time from agriculture.

There is no one best way to describe or measure dairy farm profitability. Operators will logically use different criteria to measure it depending on their life goals, size, business structure and location. High prices do not ensure farm level profitability, and prices that are more modest do not condemn farms to a lack of profitability. It is the relationship between revenue and costs (cash flow) that keeps farms in business in the short term and the return on equity – or return on assets or net worth - which defines the long-term profitability of the farm operation. There are many different production practices and, as with many small businesses, plenty of entrepreneurial initiative and innovation that make a single standard for farm profitability difficult to define. Answers to basic questions on family draw/income for a family where they are both manager and farm worker are answered differently, and farm families may be

receiving public assistance for health insurance and food stamps but still see themselves as profitable enough to continue in dairy farming.

In assessing dairy farm profitability, lenders will use one criteria based on their standard loan practice and current government regulations. The USDA and other Federal agencies will choose differing criteria (for example, USDA Rural Development uses tangible net-worth) and for others the concept of farm profitability is to have access to enough milk at a price that ensures a competitive end product.

Farms can have positive cash flow but not be profitable. A common example of this situation is a farm that has been in the family for a long time, has no debt against it, and family living expenses are modest. A farm with positive cash flow but poor profitability can survive for some time through peaks and troughs in pay price/margins, but it is ultimately in a terminal condition. Another generation will not be able to purchase that farm's assets at market values and generate enough income to sustain the operation.

A farm can be profitable and yet have negative cash flow. An example of this situation might be a farm that carries a significant debt load but also has relatively strong milk production to support that debt. When milk prices drop precipitously, the farm operation may not have enough cash flow to cover operating expenses and debt service. If something is not done quickly to adjust cash flow, short-term debt can accumulate to the point that it pushes the farm into bankruptcy.

For those operations that invest significant capital and employ managers to run their operations, profitability can be defined along standard business criteria around cost of production, or return on assets and/or equity.

For those farm families who accept that in order to cover their living expenses they need to supplement their income, a simple cost of production approach is enough so that the farm operations need only cover their costs because of the enhanced lifestyle benefits from living on a working farm. Many of these farmers are either beginning farmers[3] and/or second career farmers. This is the fastest growing

3 USDA's definition of a farm encompasses a large number of different farming operations, and the beginning farmer definition is, likewise, broad. USDA's current definition of a beginning farm is one operated by a farmer who has operated a farm or ranch for 10 years or less.

sector of farm operators, with a fifth of all farms having a principal operator who is a beginning farmer. Dairy averages about 17% of commodity production by beginning farmers, second only to poultry at 20%.[4]

For those farms that self-classify as being in the '"agriculture-of-the-middle",[5] farm profitability can come in many forms and with a mixture of different standard definitions. In good years, profitability may be a return on equity and in poor years, it will simply be a question of liquidity. Quality of life and family values will also factor into the continuation of their farming operations.

The Status of Dairy Farm Profitability

The dairy industry's progression from fewer cows producing more milk from fewer dairy herds[6] continues unabated since World War II, and the present economy could well speed up the demise of many large and small dairy farms. With the dairy industry relying more on an increasingly volatile world market with many low cost competitors, dairy farm profitability of the future may be based on the most 'efficient', lowest cost dairies that can produce to meet the expectation of the most current business model within a changing global market.

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4 **Beginning Farmers and Ranchers:** Mary Ahearn, Doris Newton – Economic Information Bulletin Number 53 May 2007. http://www.ers.usda.gov/Publications/EIB53/EIB53.pdf

5 Farmers whose operations fall between small-scale direct markets and large, consolidated firms manage over 80% of farmland in the U.S. These farmers are increasingly left out of our food system. If present trends continue, these farms, together with the social and environmental benefits they provide, will likely disappear in the next decade or two. The "public good" that these farms have provided in the form of land stewardship and community social capital will disappear with them. From a white paper by Fred Kirschenmann, Steve Stevenson, Fred Buttel, Tom Lyson and Mike Duffy.

6 *"Although the overall number of milk cow operations has declined since 2001, the number of operations with 500 or more head of milk cows has increased. Since 2001, the number of operations with 500 or more head increased by 20 percent, from 2,795 to 3,350 in 2009. The largest size group, places with 2,000 or more head, showed the greatest percentage change from 2001, increasing from 325 places in 2001 to 740 in 2009, a gain of 128 percent. While larger operations were growing in number, smaller operations declined in number. Places with less than 500 head went from 94,665 in 2001 to 61,650 in 2009, a decline of over 33,000 operations, or 35 percent…. In 2009, operations with 500 or more head accounted for 5 percent of the total milk cow operations, 56 percent of the milk cows, and 60 percent of the milk production." USDA NAAS*

This economic reality of an extended trough of farm gate prices and milk income/feed margins has led to the demise of many farm family businesses. The impact on business equity and liquidity for farmers in 2009 was at an unprecedented level that will need many months of higher stable margins in order to remedy. Industry financial experts and anecdotal reports from dairy farmers indicate that over 50% of dairy farms are under lender supervision in 2010 either to manage existing debt or the use of operational lines of credit.[7] Many farms have reached the point where there may be no remedy. Feed companies and other vendors are being more pro-active about payment terms, reducing credit because they can no longer carry farms that are unable to cash flow or still have balances from purchases in 2009. Lenders are, in some cases, waiting for the asset of their borrowers to appreciate before calling in the loans. Those that are under most pressure are farms that have:

- To purchase feed
- Have highly leveraged assets
- A traditional business model based on cash flow needs of short peaks and valleys rather than the protracted tough of 2009 followed by low margins in 2010-2011.

In 2011, dairy farmers face a major crisis because there has not been enough of a prolonged rebound in margins to repair cash flow deficits and pay down payables. This has been compounded by the effects of increased federal regulation on lenders tied with a lack of lender confidence in the face of mixed signals from the dairy industry and anticipated federal policy.[8] Current and projected higher milk

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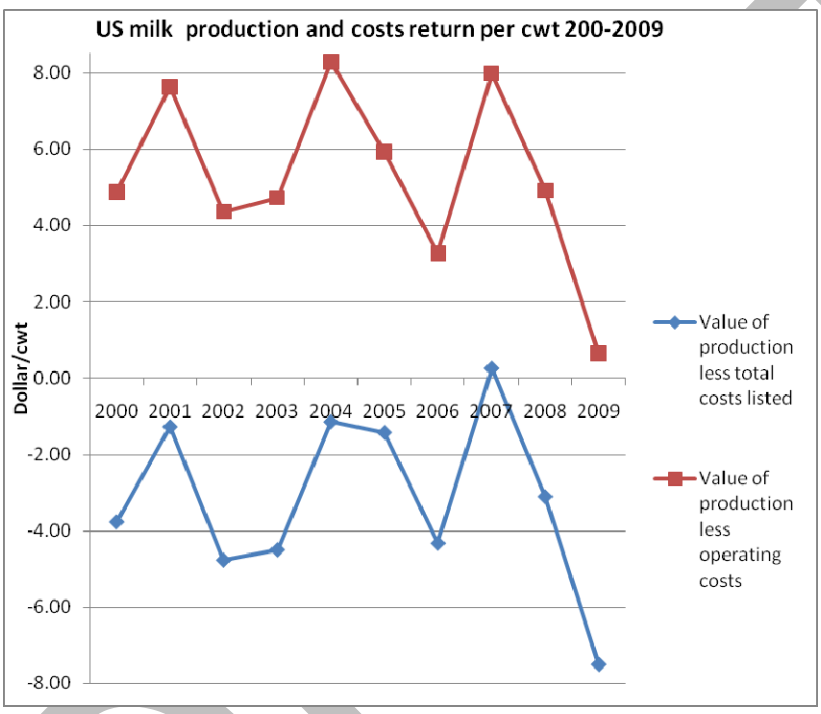
7 Senate Banking Committee, 12/1/10: According to the FDIC, farmers are falling behind on their loans at a 17-year high. Approximately two percent of farm loans are in trouble. Often, the collateral for farm loans is the farm itself, so if a farmer defaults on an operating loan they are at risk of losing their business and their home. "Because of the economy and because some farm loans are in trouble, several banks are telling us that regulators are seeing farm loans as suspect, and discouraging community banks from carrying farm loans. This attitude is hurting rural America without making the banking system safer. What is the FDIC doing to work with banks to make sure farmers have access to credit?" Kohl asked.

8Senate Banking Committee 12/1/10: Bair said that the FDIC would be open to creating guidelines specific to agriculture lending, similar to what they have done to ease mortgage and commercial lending.

prices are being undermined by poorer harvests and greater competition for corn and soybeans from the ethanol and international market resulting in disproportionally high grain prices.

Economists at USDA-ERS track cost of production[9] for both operating costs and total costs - including hired labor, general farm overhead, taxes, insurance and other non-cash items. The chart below clearly indicates the collapse in 2009, but also shows the challenge to profitability using criteria based on balance sheet values during any year.



The dairy industry is very diverse in their production practices, location, capital investment, overhead costs, and expectations. Tax rates and the value of real estate will vary within the same county and will dictate different business and production methods to cash flow and obtain a return on capital. As

9USDA ERS: Recent Costs and Returns, United States and ERS Farm Resource Regions, New Format and Regions

illustrated above, it is impossible to find common factors that can be measured to arrive at an average for the whole industry that does not necessarily reflect the financial state of the majority of dairy farmers.

In looking at measurements that can be used it is challenging to find one universal tool that can handle the volatility and variability of production and income. The milk price to feed ratio has been a familiar and easy tool to measure "profitability" but in times of great volatility this measurement is misleading. Recent research[10] examines the definition, historical pattern, and utility of the milk-to-feed price ratio (MF) as a measure of dairy farm profitability. The MF was generally an acceptable proxy of profitability in an annual sense from 1985 to 2006. The MF was steady at an average of 2.8 from 1985 to 2006 even as average annual milk price in nominal terms increased from $12 to $14/cwt. An alternative proxy for profitability is income-over-feed costs, which is measured in dollars per cwt. Comparison with an actual profit measure, rate of return on assets, is used to examine the appropriateness of the proxies. The volatility from 2007 to 2009 resulted in MF being a poor measure of profitability over that period. The implication is that MF is not the preferred measure of profitability when a significant change in the pattern of one or both price series occurs. Income-over-feed cost is a better measure of profitability in periods of volatility.

As stated earlier, Cash Flow Coverage Ratio is a reasonable short-term measure of solvency in the dairy sector. A better but more complex measure of profitability and long-term performance is ROE (or ROA). It is especially meaningful if one thinks in terms of whether a next generation or other buyer would find the business appealing to buy, but it may be less meaningful in terms of providing a comfortable living for its owner/operators. Perhaps the only best way to understand or observe farm profitability is by the number of dairies that exit the industry.

Economy of scale

The experience of 2009 has taught us that a prolonged trough in pay price and margin can affect both large and small operations over feed costs. Large dairies that expanded based on sound economic

10 Understanding the milk-to-feed price ratio as a proxy for dairy farm profitability: CA Wolf October 2010, Journal of Dairy Science

projections are economically stressed and, in some case, lenders are waiting for improvement in asset value before calling in their loan. All operations, large and small, have seen a great decrease in equity, liquidity and business confidence in 2009.

There are many examples of large and small operations that are efficient and take full advantage of the benefits of their size and location. Small operations may benefit from growing more of their own feed when commodity prices are high and the larger operations whose business model is built on purchased feed will suffer with poor margins. Smaller farms tend to have less debt per dollar of cow and thus can be more resilient in economically challenging times. Smaller farms tend to be more feed self-sufficient and thus more resilient in times of rising feed costs[11]. Smaller farms often can invest in management systems such as managed grazing and organic production that have proven to be profitable management strategies[12].

Large operations have the ability to spread debt service and overhead over high gross income and are able to purchase feed more cost-effectively in large quantities with a greater ability to hedge and protect their risk exposure. Smaller operations may be landlocked, unable to expand and without the asset base to increase debt, and are tied to buying pelleted feed at higher costs.

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11 Dietmann, Paul. 2010. A Scan of the Farm-Level Financial Situation at the End of 2009. The Status of Wisconsin Agriculture. [WWW] http://www.aae.wisc.edu/pubs/status/

Bolton, K., and Jenny Vanderlin. 2009. (October). Center for Dairy Profitability. Milk production costs in 2008 on selected Wisconsin dairy farms [WWW] http://cdp.wisc.edu/milk%20production%20costs.htm

12 Kriegl, T. 2006. Summary of economic studies of organic dairy farming in Wisconsin, New England, and Quebec. Great Lakes Grazing Network. Madison, WI: University of Wisconsin-Madison Center for Dairy Profitability.

Kriegl, T. 2008. Major cost items on Wisconsin organic, grazing, and confinement (average of all sizes) dairy farms. Madison, WI: Center for Dairy Profitability.

Dalton, T. J., R. Parsons, R. Kersbergen, G. Rogers, D. Kauppila, L. McCrory, et al. (2008) *A comparative analysis of organic dairy farms in Maine and Vermont: farm financial information from 2004 to 2006* (No. 851).

USDA data shows that despite the increased efficiency and greater average income per acre and per cow generated by smaller farms, the cost advantage of larger enterprises enables them to achieve much higher net returns. In fact, small and mid-size dairy enterprises (with 100-499 cows) had negative net returns, on average, in 2005.[13] With the largest dairy enterprises providing returns that exceed total costs (including Return On Assets and return to management), those businesses have attracted investment and were expanding rapidly up to 2009. Since the returns to small dairy enterprises do not cover all of their costs, many more small enterprises are leaving dairy farming than are entering. According to USDA ERS data between 1992 and 1997, most capacity expansion at large farms occurred in farms with 1,000-3,000 head. But after 1997, most new capacity at large dairy farms was added on farms with more than 3,000 head, with some going to operations with over 10,000 head. Farmers have discovered ways to more effectively manage much larger dairies in recent years, and the bulk of farm investment is directed at those much larger farms.

While the increase in the size of operations has led to lower costs due to economies of scale and increased gross income to share overhead costs, it also concentrates milk cows and their manure onto a smaller land base. In recent years, there have been more measurements of air and water contamination, with increasing amounts of local, state and federal conservation regulation and oversight. As concern over environmental damage grows and global climate change pressure increases, the large dairies will need to be proactive in accessing the benefits of different production methods, for example the measurement of methane produced per cow. The costs of conforming to environmental regulation at large dairies does not yet offset the production cost advantages held by those operations, and regulations have not affected the proportional increase in the number of large dairies.

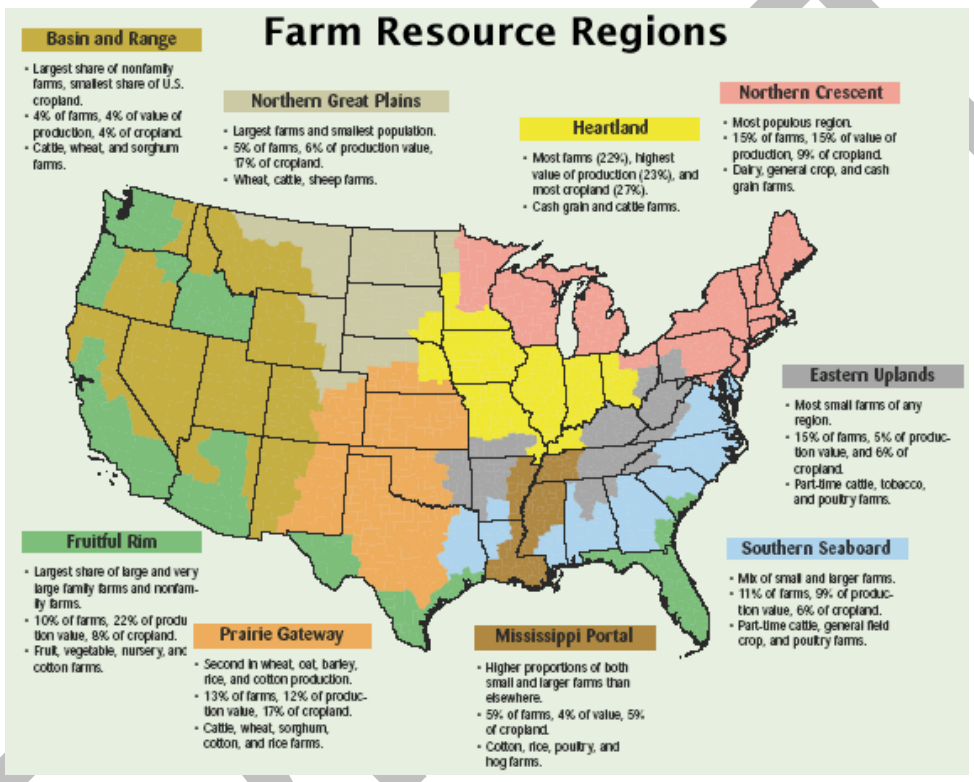
Regional Differences

Regional differences in costs of production and overhead are calculated regularly by USDA ERS. The regions that are used in their data are defined below: "**ERS U.S. Farm Resource Regions:** The U.S. farm sector consists of a highly diverse set of businesses and farm households committed to living in rural

13 USDA ERS 2007: Costs per hundredweight of milk produced fall by nearly half as herd size increases from fewer than 50 head to 500 head, and continue to fall, but less sharply, at even larger herd sizes.

areas and engaging in farm economic activities. Since the early 1900's, USDA analysts have sought to identify patterns in U.S. farming that might further the understanding of differences in financial performance of farms and the economic well-being of farm households. USDA's Economic Research Service (ERS) constructed regions (called Farm Resource Regions) that depict geographic specialization in production of U.S. farm commodities."

The map below shows the regions geographically:



The table below shows the data from 2009 and highlights the variation in cost of production and overhead costs.

Average milk production income and expenses by region – 2009 – USDA ERS data

Milk production costs and returns per cwt. sold 1/	Northern Crescent	Heartland	Prairie Gateway	Eastern Uplands	Southern Seaboards	Fruitful Rim
Item	2009	2009	2009	2009	2009	2009
Gross value of production:						
Milk sold	13.36	12.89	12.23	13.65	14.83	12.05

Milk production costs and returns per cwt. sold 1/	Northern Crescent	Heartland	Prairie Gateway	Eastern Uplands	Southern Seaboards	Fruitful Rim
Item	2009	2009	2009	2009	2009	2009
Cattle	1.08	1.43	1.68	1.62	0.93	1.02
Other income 2/	0.84	0.80	0.73	0.89	0.89	0.83
Total, gross value of production	15.28	15.12	14.64	16.16	16.65	13.90
Operating costs:						
Feed						
Purchased feed	5.71	5.65	9.87	6.39	8.79	9.74
Homegrown harvested feed	4.64	4.51	1.12	5.00	2.78	1.69
Grazed feed	0.10	0.09	0.04	0.28	0.16	0.05
Total, feed costs	10.45	10.25	11.03	11.67	11.73	11.48
Other--						
Veterinary and medicine	1.12	1.22	0.64	1.09	0.87	0.71
Bedding and litter	0.40	0.35	0.08	0.18	0.15	0.10
Marketing	0.27	0.30	0.39	0.36	0.47	0.32
Custom services	0.52	0.53	0.47	0.50	0.79	0.44
Fuel, lube, and electricity	0.67	0.60	0.42	0.69	0.64	0.46
Repairs	0.80	0.78	0.37	0.95	0.66	0.51
Other operating costs 3/	0.00	0.00	0.00	0.00	0.00	0.00
Interest on operating capital	0.02	0.02	0.02	0.02	0.02	0.02
Total, operating cost	14.25	14.05	13.42	15.46	15.33	14.04
Milk sold minus operating costs	-0.89	-1.16	-1.19	-1.81	-0.50	-1.99
Allocated overhead:						
Hired labor	1.72	1.45	1.55	1.78	1.83	1.80
Opportunity cost of unpaid labor	3.36	3.18	0.41	5.27	2.16	0.93
Capital recovery of machinery and equipment 4/	3.85	4.33	1.88	6.63	4.04	2.35
Opportunity cost of land (rental rate)	0.03	0.05	0.00	0.11	0.04	0.01
Taxes and insurance	0.32	0.25	0.13	0.29	0.23	0.18
General farm overhead	0.80	0.62	0.21	0.68	0.62	0.35
Total, allocated overhead	10.08	9.88	4.18	14.76	8.92	5.62
	Northern Crescent	Heartland	Prairie Gateway	Eastern Uplands	Southern Seaboards	Fruitful Rim

Milk production costs and returns per cwt. sold 1/	Northern Crescent	Heartland	Prairie Gateway	Eastern Uplands	Southern Seaboards	Fruitful Rim
Item	2009	2009	2009	2009	2009	2009
Total costs listed	24.33	23.93	17.60	30.22	24.25	19.66
Value of production less total costs listed	-9.05	-8.81	-2.96	-14.06	-7.60	-5.76
Value of production less operating costs	1.03	1.07	1.22	0.70	1.32	-0.14
Supporting information:						
Milk cows (head per farm)	109	113	1,064	95	241	522
Output per cow (pounds)	19,528	18,825	18,309	15,346	16,536	19,949

The table above gives a good indication of the regional variation in costs of production and overhead. With an overhead difference of $10.58 per cwt. from the Eastern Uplands (W. Virginia, Kentucky and Tennessee) to the Prairie Gateway (Texas, New Mexico, Oklahoma, Kansas) it is no surprise that the average herd size between the two regions varies by 969 cows, with the low overhead region attracting large dairies. It is also evident from the data that the low costs are not only on overhead but also on operating costs.

The data provides a cost per cwt. for milk sold that ranges from $12.05 to $14.83 per cwt. and a gross income (gross value of milk sold minus total operating costs) ranging from a negative $1.99 per cwt. to a negative $.50 per cwt. A difference of milk price of $2.78 per cwt. yielded a $1.44 difference in gross profit.

Feed costs varied only by $1.50per cwt. and labor cost were within $0.50 per cwt. for each region.

The largest difference between the various geographic regions is with capital recovery of machinery and equipment. USDA ERS defines this item as “Capital recovery cost is an estimate of the cost of replacing the capital investment in machinery and equipment that is used up in the annual production process, plus interest that the remaining capital could have earned in an alternative use.” While this is a non-cash use, it is critical for the long-term profitability of the operations and a difference of $4.75 per cwt. is significant.

It is evident from the data that, based purely on financial data, any new dairy operations would be set up in Prairie Gateway (Texas, New Mexico, Oklahoma, Kansas) as a low cost/low milk price area with a profit of $1.22 per cwt. gross income minus operating cost, or in the Southern Seaboard (Virginia, North Carolina, South Carolina, Georgia, Alabama) higher cost but also a milk deficit area with a high milk price and a gross income minus operating costs of $1.32 per cwt.

Current Legislative and Regulatory Authorities

Dairy programs are legal authorizations or mandates specified by Congress and implemented as regulations by the US Department of Agriculture or another executive agency of the federal government. Some of these programs exist under permanent law. Others are temporary. They may exist for many years, but periodically Congress needs to reaffirm them. The so-called Farm Bill is an "omnibus" legislation that mostly codifies changes to laws and programs that exist in other statutes. It is in this sense usually a bill of amendments to existing law. Underlying laws, such as the Agricultural Adjustment Act of 1933, the Agricultural Marketing Agreement Act of 1937, or the Agricultural Act of 1949 contain the original authorizations for basic dairy programs, which are importantly but not necessarily always affected by a particular Farm Bill. This chapter of this report focuses on existing laws and programs and attempts to offer the Secretary guidance in how the existing programs might best be used in those cases where the Secretary has some discretion and flexibility. It is also an objective to better inform the dairy community about existing laws and the opportunities and limits that the Secretary faces in working within existing statutes and regulations.

Congress has latitude in how strongly it directs an action of the Executive Branch. In many cases, a law authorizes USDA or another agency to do something, but it does not require or even enable that action. For example, under the old parity-based Dairy Price Support Program, the Secretary of Agriculture could announce a support price for milk that was no less than 75% of the parity price but no more than 90%. Thus, the Secretary was authorized to choose within a range. Sometimes, the Secretary is allowed to decide whether or not to do anything at all. For example, he or she is not required to implement a Federal Milk Marketing Order either by the instruction of Congress or at the request of farmers. The Secretary has the authority to deny a request for a new Order. Lastly, Congress may give the Secretary authority, but not funding to implement.

Current programs are described that have direct effects on milk prices, dairy product sales, farm incomes, or other direct aspects of dairy profitability and volatility. Many programs outside of USDA authority affect dairy markets, including tax policy, public borrowing, transportation, energy, and environment. The primary focus will be on dairy-specific programs that could reasonably impact dairy markets. Where there are specific recommendations related to the operation of an existing program (as opposed to creating new legislation to modify an existing program), that recommendation is made at the beginning of each program section. A concluding recommendation is offered that spans several programs.

Before that discussion, there are two caveats. The first concerns the important role of the President's Office of Management and Budget (OMB) in constraining executive discretion. The second is an acknowledgement that there can be desired, undesired, and unanticipated consequences to any policy choice.

The Office of Management and Budget

The Secretary of Agriculture can only initiate and operate programs 1) which he is authorized to administer and 2) which have a well-defined mandatory or discretionary source of funding. If the program is mandatory, Congress provides authority to spend whatever money is required to achieve the purposes of the Act. If the program is discretionary, Congress may or may not provide funding to support the program. When funding is limited, which of course is the general rule, the Office of Management and Budget plays a crucial role in determining what can and what may be done.

The following is excerpted from the website of the President's Office of Management and Budget. It describes the structure and role of the OMB.

The Mission and Structure of the Office of Management and Budget

The core mission of OMB is to serve the President of the United States in implementing his vision across the Executive Branch. OMB is the largest component of the Executive Office of the President. It reports directly to the President and helps a wide range of executive departments and agencies across the Federal Government to implement the commitments and priorities of the President.

As the implementation and enforcement arm of Presidential policy government-wide, OMB carries out its mission through five critical processes that are essential to the President's ability to plan and implement his priorities across the Executive Branch:

Budget development and execution, a significant government-wide process managed from the Executive Office of the President and a mechanism by which a President implements decisions, policies, priorities, and actions in all areas (from economic recovery to health care to energy policy to national security);

Management — oversight of agency performance, Federal procurement, financial management, and information/IT (including paperwork reduction, privacy, and security);

Coordination and review of all significant Federal regulations by executive agencies, to reflect Presidential priorities and to ensure that economic and other impacts are assessed as part of regulatory decision-making, along with review and assessment of information collection requests;

Legislative clearance and coordination (review and clearance of all agency communications with Congress, including testimony and draft bills) to ensure consistency of agency legislative views and proposals with Presidential policy; and

Executive Orders and Presidential Memoranda to agency heads and officials, the mechanisms by which the President directs specific government-wide actions by Executive Branch officials.

http://www.whitehouse.gov/omb/organization_mission/

OMB has significant influence on the spending ability of any federal agency, including USDA. When Congress has provided a clear mandate and sufficient funding to conduct a program, OMB's primary concern is the efficient execution of the required program. However, when an authorized program is unfunded or under funded the Secretary must work with OMB to determine where funding might be available or even whether any such funding can be found. Inasmuch as OMB reports to the President, OMB's priorities, both programmatically and from the standpoint of financial stewardship, are driven by the President's overarching priorities. In periods when budgets are tight, OMB tows a hard line on discretionary spending. Even when budgets have some slack, OMB will and must evaluate tradeoffs when an Executive agency, like USDA, makes a request.

Comments on Possible Unintended Consequences

One of the inherent challenges in any public policy is that few choices make everyone better off. The political and policy worlds necessarily involve tradeoffs. In the dairy sector, tradeoffs exist among producers and among dairy processors, retailers, consumers, taxpayers, and alternative agricultural or food sectors. Tradeoffs also exist between producers and are evident in debates related to farm size, region of the US and the like.

The DIAC has been charged with addressing dairy farm profitability and milk price volatility. This puts our focus on the farm sector, but downstream effects constrain any dairy policy debate. We also recognize that even those policies that are good for some dairy farmers may not good for all dairy farmers. To the extent it is humanly possible, our intention is to focus broadly on improving dairy farm profitability and reducing milk price volatility without regard regional or other difference that might exist at the farm level. While we have not been charged to address business or individual issues that derive primarily beyond the farm sector, we cannot look at farm level policy solutions without considering their possible downstream effects over time.

We also recognize that the Secretary has a responsibility to balance and represent a public interest in the administration of USDA programs and acknowledge that achieving that balance is a difficult task. The purpose of the policies discussed here is to counter excessive market conditions, but not to eliminate fundamental market functions.

The Dairy Product Price Support Program

> *Recommendation Note:*
>
> *At the conclusion of the chapter on existing laws and programs, we offer a recommendation that relates to the Secretary's use of the DPPSP. We will also make a recommendation concerning legislative changes that impact the DPPSP.*

The Dairy Price Support Program (DPSP) was authorized under the Agricultural Act of 1949 and has been reauthorized by subsequent Farm Bills. The Act gave the Secretary of Agriculture discretion to establish a support price that would cover 75-90 percent of "parity" (a measure of farmers' purchasing power). In 1981, Congress suspended the requirement that the Secretary establish support prices within that range and, in 2008, the parity language was dropped altogether.

The 2008 Food Conservation and Energy Act (FCEA or "Farm Bill") also altered the purchase price targets, replacing a support price for milk with support prices for commodity cheddar cheese, butter and nonfat dry milk. This altered program was titled the Dairy Product Price Support Program (DPPSP). Purchase prices, specified in law by FCEA or announced by USDA prior to 2008, are listed in the following table:

Price	Before FCEA 08	After FCEA 08
Support Price for Milk Used in Manufacturing, average fat test	$9.90	not specified
Purchase Price for Cheddar Cheese, blocks	$1.1314	$1.13
Purchase Price for Cheddar Cheese, barrels	$1.1014	$1.10
Purchase Price for Butter	$1.05	$1.05
Purchase Price for Nonfat Dry Milk	$0.80	$0.80

USDA is obliged to buy any and all quantities of eligible product offered at the announced purchase prices. Typically, any such product so acquired will either be sold back into commercial markets at the sellback price or will be made available for use in a food assistance program (for example, under Sec. 416(b) or one of the domestic programs, such as TEFAP or School Lunch).

To the extent that manufacturers take advantage of this guaranteed price, market prices should not fall below the government offer price, or at least not by very much. In practice, sellers show some reluctance to sell cheese and butter to the government. USDA issues standards for product purchases that do not match the standards required by other market buyers and payment terms are outside of industry norms. In January 2009 wholesale cheddar cheese prices were six to seven cents per pound less than the USDA purchase price for three weeks without generating sales to the CCC. USDA should examine this market resistance and make program changes that minimize reluctance to participate.

The support prices assure manufacturers of these commodities that they will have a market for the products. Also, prices of these products are the foundation for federal order milk prices, so the effect of purchases is widespread. Some analysts suggest that the support price program has resulted in too many resources being directed toward production of the targeted commodities compared to other products that might have broader market opportunities. If the distortion leads to inefficient allocation of resources in dairy markets, returns to farmers will eventually be reduced.

Although Congress specified a fixed support price for milk from 1981 to 2008, when it passed the Food, Conservation, and Energy Act of 2008 it changed specifications of commodity support prices from "shall be" to "shall be no less than." In so doing, the Act created authority for the Secretary to announce higher purchase prices than those specified in the bill.

Secretary Vilsack used that discretionary authority to increase the purchase prices for cheddar cheese and nonfat dry milk in August, September and October 2009. Compared to the purchase prices listed in the table above, the Secretary increased the purchase price of cheddar cheese by 18 cents per pound (16%) and nonfat dry milk by 12 cents per pound (15%). This action resulted in little dairy support program purchases of NDM by the CCC, as product prices increased over the same period.

In November 2009, support prices for cheddar cheese and nonfat dry milk under the DPPSP reverted to the levels specified in the FCEA. The Secretary's authority to make changes in the DPPSP support prices is limited by available funding. The Congressional Budget Office, using budgetary guidelines created by Congress itself, determines if Congress can afford to pass a bill that has budgetary implications. Once a bill becomes law, if it involves some discretionary action or decisions by the Secretary, then the President's Office of Management and Budget has the authority to decide if the Executive Branch can afford it.

Milk Income Loss Contract

Recommendation Note:

In the chapter on alternative laws and programs, we offer a recommendation concerning legislative changes that impact the MILC.

The Milk Income Loss Contract (MILC) is a form of countercyclical income support that draws some elements from the structure of the Northeast Dairy Compact and the countercyclical price subsidies established for program crops (food and feed grains, etc.) in the Farm Security Act of 2002.

The Northeast Dairy Compact was a Congressionally sanctioned agreement between the six New England states to coordinate a minimum price for Class I milk marketed in their jurisdiction. When Congressional approval for this multi-state Compact expired, the calculation methodology was adapted to a countercyclical income subsidy that would apply to all dairy farmers in the contiguous United States.

The Boston city zone price of $16.94 was established as the price trigger. A payment rate was determined as 45 percent of the difference between the announced monthly price and the trigger, approximately the same percentage as the Class I utilization in New England. In addition, a payment limit was established based on the pounds of milk marketed by a single dairy operation. The quantitative limit represents a type of payment limitation that has two objectives. It limits government exposure to budget costs. Furthermore, it means smaller farmers will receive a greater benefit relative to their gross income, a policy objective that has had broad support in Congress. In this framework, the actual expenditures depend on the magnitude of the payment rate as well as the marketings payment limit. Inasmuch as many farms market more milk in a year than the annual marketing limit, farmers are allowed to choose the month when they become eligible to receive payments. Payments begin in that month or the first month thereafter in which a payment rate is announced and continue until the marketing limit is reached. Payments counting toward the limit are reset in October of each year.

In the FCEA, Congress modified the trigger price to include an automatic adjustment for changes in the prices farmers pay for certain feeds used in a dairy ration. USDA's National Agricultural Statistics Service routinely calculates the national dairy ration cost. When the monthly ration cost exceeds $7.35 per cwt., the trigger price is increased by 45% of the difference between the ration-cost trigger and the estimated actual cost. For example, if the dairy ration cost is estimated to be 10% above $7.35, the milk payment trigger rises 4.5% (or $16.94 times 1.045 = $17.70). The FCEA reduces the MILC payment rate from 45 to 34 percent of the difference between the announced monthly price and the trigger price and increases the automatic feed adjustment trigger cost from $7.35 to $9.50 beginning on September 1, 2012.

The MILC program is administered by the Farm Service Agency of the U.S. Department of Agriculture and is a mandatory program over which USDA has no discretionary authority. USDA does promulgate rules to interpret and enforce the program as authorized by Congress. These rules define requirements for eligibility and compliance, but they do not alter the fundamental parameters specified in legislation.

Federal Milk Marketing Orders

Recommendation 1:

The Committee recommends further work by USDA or some other entity to analyze the operations of the FMMO system, including, but not limited to, end-product pricing's impact on milk price volatility and impact of classified pricing and pooling on processing investment, competition and dairy product innovation.

Recommendation Note:

Although FMMOs provide some valuable services to the dairy sector, their use of end-product pricing and pooling raise concerns. The committee feels that these are critical issues for addressing our charge, but that we have not been given sufficient resources or time to fully evaluate market order administration within the current legislative context and make more specific recommendations. Some important changes may require Congress to act.

In the chapter on alternative laws and programs, we offer a recommendation concerning legislative changes that impact Federal Milk Marketing Order s.

Federal Milk Marketing Orders (FMMOs) are the oldest U.S. dairy industry specific programs. Milk marketing cooperatives used classified pricing and pooling long before passage of enabling federal and state legislation. Orders were adopted under both federal and state laws beginning in the 1930s. Over time, most state laws gave way to the federal law due to states' inability to price milk in interstate trade. However, several states continue to have some form of milk price regulation, including California, New York, Pennsylvania, Virginia, Maine, Montana, Nevada, and North Dakota.

Fluid milk processors are automatically subject to the requirements of a FMMO. Manufacturers of other dairy products are not automatically regulated. Instead, in order to share in Class I (beverage) milk price premiums, manufacturers of other products are required to demonstrate their capacity to supply milk to the fluid milk market. The specific performance or pool qualification requirements vary across orders.

In addition to defining eligibility to participate in the order, these performance requirements can exclude competitors from the market order. The USDA must be vigilant to assure that criteria for participation are justified and not exploited by some groups of farmers to avoid sharing market order premiums with others.

Marketing orders are complex regulatory instruments. Many comprehensive descriptions are available to interested readers. Rather than focusing on the mechanics of the orders, the Committee wishes to highlight several aspects of market order operation that are related to its charge.

The AMAA of 1937 authorizes but does not mandate Federal Orders. Orders are initiated and amended through producer requests followed by formal hearings, briefings, recommended decisions, public comments and, ultimately, final decisions by USDA. The AMAA requires the Secretary to craft orders that are "in the public interest," meaning the Secretary has to balance the objectives and concerns of farmers with those of the rest of the supply chain as well as consumers. Changes in an order are approved by an affirmative vote of two-thirds of the dairy farmers whose prices would be subject to the order. Farmers may only vote for or against the entire order, they cannot vote on specific provisions of the order. If a vote fails, the order ceases to exist. Today, marketing orders cover about two-thirds of the US milk supply.

Federal Orders play a valuable role in oversight of compliance issues such as milk component testing, contract enforcement, auditing, and in data gathering and publication of statistics vital to market transparency.

The current structure of the Federal Order system uses end product pricing to determine minimum classified prices. Under end-product pricing formulas, CME spot prices for cheese and butter have a large influence on milk prices, even though they are not used directly in the formulas. Processors typically use CME prices a reference to reduce their margin risk. Thus, the actual pay prices collected from plants by the National Agricultural Statistics Service (NASS) tends to be highly correlated with the CME price. The spot commodity markets trade very little product relative to the total volumes manufactured and exhibit large and sometimes unpredictable swings in price. This aggravated price movement is translated to farmers as increased milk price volatility. There is a widespread concern that the CME markets are subject to manipulation by a small group of traders, although CME and the Commodity Futures Trading

Commission, which has federal oversight, have repeatedly stated that trading activity is monitored and they do not find evidence of frequent or routine illegal manipulation.

Some other fundamental aspects of classified pricing and pooling may hamper dairy farmers' ability to innovate and create unintended incentives for both farmers and processors. Milk prices paid by processors of commodities referenced in classified prices tie relatively closely to their finished product prices. Manufacturers of other dairy products face additional risk as their prices and costs deviate from those of the referenced commodities. The reduced margin uncertainty for manufacturers of the basic commodities makes those commodities relatively low-risk investments. This distortion discourages dairy product innovation, reduces market efficiency, and therefore lowers money available for farmers.

Similarly, improvements in dairy processing technology and changes in consumer preferences may render some of the original justifications for classified pricing and/or pooling obsolete. In the mid-20th Century, the percentage of Federal Order milk marketing used to make fluid milk products was in the range of 60-65%. In the 21st Century, Class I utilization has been in the neighborhood of 40%. Developments in milk transportation and storage ability, long-term declines in per capita beverage milk consumption, establishment of extremely large farmer-owned cooperatives, development of protein filtration technology, the emerging product preferences of both domestic and global dairy consumers and a host of other factors necessitate a strategic look at the future role of Federal Orders, especially in its role in price setting and pooling.

While the Federal Orders have many functions in the dairy industry, the underlying structure, as well as the rulemaking required, means that the Federal Order system is not a viable vehicle for the Secretary of Agriculture to use to assist dairy farmers during periods of stress. However, the Committee recommends further work by USDA, this Committee or some other commission focused on analyzing the operations of the FMMO program, including but not limited to end-product pricing's impact on milk price volatility and impact of classified end-product pricing and pooling on processing investment, dairy product innovation and competition.

Dairy Export Incentive Program

Recommendation Note:

The committee has no specific recommendations concerning either the current operation of the DEIP or possible legislative modifications to DEIP. In the chapter on alternative actions, we do make a broader recommendations related to dairy exports programs and activities.

The Dairy Export Incentive Program (DEIP) helps exporters of U.S. dairy products make sales to foreign buyers when US prices exceed prevailing world prices for targeted dairy products and destinations.14 As part of its World Trade Organization commitments resulting from the Uruguay Round Agreement on Agriculture, annual export subsidy ceilings are set for each commodity. These define maximum quantities and maximum budgetary expenditures, which are charged against the U.S.' constrained subsidies under the WTO agreement. Private companies, not the U.S. government, make all sales under the DEIP.

USDA issues two types of bonus invitations: those inviting exporters to compete for a bonus, and those inviting exporters to apply for an announced bonus. When USDA issues an invitation for offers, agricultural exporters negotiate a sales contract with prospective buyers in eligible countries. The sale may be contingent on USDA's approval of a bonus. Each prospective exporter submits requests to USDA suggesting a bonus that would allow sales to take place at the agreed price. USDA chooses which bonuses to award.

Under an announced bonus, requests meeting all program requirements are accepted in the order submitted. USDA has the right to reject any or all bids.

Once USDA accepts a bonus request, the exporter and USDA's Commodity Credit Corporation (CCC) enter into an agreement. The bonus is paid to the U.S. exporter in cash. The CCC determines the bonus payment by multiplying the bonus specified in the agreement by the net quantity of the commodity

14 For more information: (http://www.fas.usda.gov/exportprograms.asp)

exported. Once an exporter furnishes USDA with evidence that the specified commodity has been exported to the target destination under the terms of the agreement, the exporter receives the bonus.

To be consistent with WTO agreements, USDA has limited the use DEIP to instances when US prices are above prices in international markets and the claim that we are countervailing other countries' subsidies is plausible. In recent years, U.S. and "world" dairy commodity prices have been closely aligned or the U.S. price has been below prices in competing countries; hence, the economic and legal justification for an export subsidy has been weak. Moreover, the EU has reduced its dairy export subsidies as part of its agricultural policy, diminishing arguments that the U.S. is offsetting other countries' subsidies. The EU did resume export subsidies following price-supporting actions it took during 2009, but maintains its longer-term commitment to dismantling dairy industry support programs.

In addition to DEIP, other FAS programs are intended to enable or assist U.S. agricultural and food exports. These range from export promotion activities (such as trade shows, tours and visits) to programs that facilitate commercial transactions. Many agricultural businesses use export credit guarantees for commercial financing of U.S. agricultural exports.

Use of DEIP or other export assistance as a countercyclical measure to reduce dairy price volatility is limited by the requirements that U.S. prices be above world prices and/or the existence of evidence that other countries are providing export subsidies. However, it is sensible to exhaust all possible DEIP options before taking more extreme measures, such as raising support prices. We believe this is well understood within USDA.

Risk Management Programs

Recommendation 2:

This Committee recommends an ongoing examination of LGM-Dairy and an overhaul of AGR-Lite in order to make them more accessible and easier for dairy farmers to use.

Recommendation Note:

USDA has recently implemented several changes to LGM-Dairy. We believe these are important and useful. We encourage USDA to monitor the impact of these changes on usage by dairy farmers.

USDA-RMA has previously engaged in producer education programs related to risk management. In light of recent and possible future changes, new educational efforts could greatly benefit dairy farmer. Because volatility in the dairy industry is a relatively new experience (less than 20 years) for many farmers, it is understandable that farmers are unsure of whether or how to manage their own risk. USDA risk management education could provide valuable information about a variety of tools and methods that can be used. Thus, RMA training should not focus exclusively on how to use one particular tool, but rather on approaches to economic risk management more broadly.

In the chapter on alternative policies, we make additional recommendations related to existing public risk management tools.

Dairy farmers may use public or private programs to manage risk. Farmers, without government assistance, can hedge milk or input prices using futures and options contracts on traded exchanges. In addition, depending on location, some farmers can forward contract milk with dairy cooperatives and other buyers. This choice is not available to farmers in California because no permitted forward contracting mechanism exists within the structure of state-regulated milk pricing system there. Farmers can also forward contract some inputs, mainly feed, with suppliers.

There are some concerns that limit the use of risk management tools. Futures contracts may be "lumpy," offered in unit sizes that are not easy for small producers to use on their own. Also, some hedging tools require "margin," a posting of earnest money to cover the financial exposure of hedge positions. These margin calls are designed to make sure that those with positions in the futures market are able to meet their financial obligations under their contracts. Margin requirements can tie up a significant amount of cash in a dairy operation.

USDA's Risk Management Agency (RMA) offers two risk management tools that are designed to help farmers by matching the size of contracts to farmers' needs. One is designed specifically for dairy

farmers and is called Livestock Gross Margin - Dairy, or LGM-Dairy. Another is a program available for any type of farm called Adjusted Gross Revenue Lite or AGR-Lite.

Livestock Gross Margin (LGM) Dairy

LGM-Dairy, introduced in 2007, is a bundled hedging tool that provides protection to dairy producers for the difference between feed casts and milk prices. Rather than having to hedge milk prices and feed prices separately, LGM-Dairy establishes a floor on gross margins (milk price minus feed costs) and pays an indemnity if the margin falls below the established floor. The farmer chooses how much of his or her milk to cover and the month of the coverage. Premiums are based on expected milk revenue and expected feed costs that are calculated using futures market prices on Class III milk, corn and soybean meal at the time the insurance is purchased. While any given farmer's milk revenue or feed costs will not equal the futures prices on the Chicago Mercantile Exchange (CME), his or her margin changes are expected to correlate closely enough to CME price movements to make the tool useful for reducing risk.

Unlike futures contracts, LGM-Dairy does not require a minimum amount of milk. Producers may sign up for this program monthly and may choose to cover up to ten months of production at a time. Farmers may not purchase insurance for margins on more than 24 million pounds of milk over that period.

Recently, the Risk Management Agency announced several changes to how they would administer LGM-Dairy. The new LGM-Dairy uses a different procedure for calculating milk returns over feed costs that may correlate more closely with farmers' actual margins. The new program also encourages producer participation by providing a subsidy to lower the premium costs for farmers.

Adjusted Gross Revenue Lite (AGR Lite)

In 1998, RMA developed a new insurance product intended for all farmers and based on adjusted gross income (AGI) as reported on Schedule F (Profit or Loss from Farming, Form 1040) of the farm business's taxes. The program combines protection from production losses related to natural causes with output price declines or input price increases related to market fluctuations. The product became quite complex and was difficult to use. AGR-Lite was developed in 2002 to provide a simpler tool that would have the same goal.

Any farmer can use AGR-Lite and the revenue protection applies to the whole farm, not one product. Premiums are lower for farmers who sell more products because their expected total margin risk is reduced by that diversity.

Participation rules are not particularly conducive to dairy production. No more than 35% of farm income can come from animals or animal products. Milk marketings are limited to 1.6 million pounds. The program only calculates costs of feed that is purchased, not feed that is grown. Total farm liability cannot exceed $1 million and gross income must be below $2,051,282.

Farmers select the coverage percentage of their total adjusted gross income (AGI) and the percentage of the difference that they can receive if their actual AGI is less than the selected income coverage level. The maximum income coverage is based on each producer's average AGI over the previous five years.

Use and Participation in LGM-Dairy and AGR-Lite

Although they are similar, the LGM-Dairy and AGR-Lite approaches to income protection differ beyond the fact that one is tailored to dairy and the other is designed for diversified farming operations. LGM-Dairy works on the basis of a price spread, the difference between the price of milk and the cost of feed expressed relative to an amount of milk produced. The resulting margin is expressed in $/cwt. AGR-Lite is based on the concept of income less production expenses, where both vary with the amount of milk produced (and other agricultural sales) and the amount of feed (and other production inputs) purchased.

Few dairy farmers have participated in either of these programs. Several factors explain this lack of participation. Size limits, market conditions, and program design and targets all contribute to their low participation by dairy farmers.

This Committee recommends an examination and overhaul of these programs in order to make them easier for dairy farmers to use. Current feedback from the farm community is that these programs are much too complicated and involve too much paperwork. The limiting factors described above should also be addressed in order to develop these programs into valid risk management tools for dairymen.

CCC Charter Act, Section 5

The Commodity Credit Corporation (CCC) was created in 1933 to handle commercial transactions that involve agricultural commodities. It is the business vehicle through which various programs stabilize, support, and protect farm income and prices. CCC also facilitates the movement of surplus or other agricultural commodities to various government and non-governmental outlets.

The Commodity Credit Corporation Charter Act of 1948 establishes the general purpose of the CCC and its operating rules and authorities. Section 5 of the Act, excerpted below, grants authorities to acquire and disburse agricultural commodities.

SEC. 5. [15 U.S.C. 714]

SPECIFIC POWERS.—In the fulfillment of its purposes and in carrying out its annual budget programs submitted to and approved by the Congress pursuant to Chapter 91 of Title 31, the Corporation is authorized to use its general powers only to —

(a) Support the prices of agricultural commodities (other than tobacco) through loans, purchases, payments, and other operations.

(b) Make available materials and facilities required in connection with the production and marketing of agricultural commodities (other than tobacco).

(c) Procure agricultural commodities (other than tobacco) for sale to other Government agencies, foreign governments, and domestic, foreign, or international relief or rehabilitation agencies, and to meet domestic requirements.

(d) Remove and dispose of or aid in the removal or disposition of surplus agricultural commodities (other than tobacco).

(e) Increase the domestic consumption of agricultural commodities (other than tobacco) by expanding or aiding in the expansion of domestic markets or by developing or aiding in the development of new and additional markets, marketing facilities, and uses for such commodities.

(f) Export or cause to be exported, or aid in the development of foreign markets for, agricultural commodities (other than tobacco) (including fish and fish products, without regard to whether such fish are harvested in aquacultural operations).

(g) Carry out conservation or environmental programs authorized by law.

Carry out such other operations as the Congress may specifically authorize or provide for.

In the Corporation's purchasing and selling operations with respect to agricultural commodities (other than tobacco) (except sales to other Government agencies), and in the warehousing, transporting, processing, or handling of agricultural commodities (other than tobacco), the Corporation shall, to the maximum extent practicable consistent with the fulfillment of the Corporations purposes and the effective and efficient conduct of its business, utilize the usual and customary channels, facilities, and arrangements of

trade and commerce (including, at the option of the Corporation, the use of private sector entities).

This Section of the legislation defines a number of things that the CCC may do; however, this is different from what is actually possible or required. These general authorities enable the Secretary of Agriculture to implement the procurement and sale of dairy products under the DPPSP and various other programs related to domestic and international food assistance.15

If no specific program requires the Secretary to procure and/or distribute dairy or other commodities, he could use the provisions of this Charter to do so if and only if there is a source of funds authorized by the Office of Management and Budget. Many of the programs that use the CCC as a conduit are described in the next two sections.

Domestic Food Assistance Programs

Recommendation Note: *At the conclusion of the chapter on existing laws and programs, we offer a recommendation that relates to the Secretary's use of domestic food assistance programs.*

For more information: (http://www.fns.usda.gov/fns/)

The majority of the budget of the US Department of Agriculture, about two-thirds, is devoted to food and nutrition programs. These programs are generally administered through the Food and Nutrition Service and include the following:

1. Supplemental Nutrition Assistance Program (SNAP, formerly Food Stamps)
2. Special Supplemental Nutrition Programs for Women, Infants, and Children (WIC)
3. School Meals
    a. National School Lunch
    b. Fresh Fruit and Vegetable Program

15 The CCC is managed by a Board of Directors, subject to the general supervision and direction of the Secretary of Agriculture, who is an ex-officio director and chairperson of the Board.

c. School Breakfast Program
d. Special Milk Program
e. Team Nutrition

4. Summer Food Service Program
5. Child and Adult Care Food Program
6. Food Assistance for Disaster Relief
7. Food Distribution
    a. Schools/Child Nutrition Commodity Programs (CNP)
    b. Food Distribution Program on Indian Reservations
    c. Nutrition Services Incentive Programs (NSIP)
    d. The Commodity Supplemental Food Program (CSFP)
    e. The Emergency Food Assistance Program (TEFAP)

Only the Special Milk Program is exclusive to dairy products, but many of these programs have played a significant role in increasing the availability and use of dairy products among children and the needy. The Special Milk Program provides cash subsidies to schools for milk they serve to children not covered under the School Lunch and similar programs.

USDA provides grants to states, which in turn deliver WIC program benefits to pregnant women, women with infants or young children. Historically, WIC has had a strong emphasis on providing milk and other nutritious dairy products to these people.

TEFAP was originally started during the early 1980s when surpluses under the DPSP became burdensome. Many elderly and other needy US citizens benefited from donations of surplus cheese and butter. The success of the Temporary Emergency Food Assistance Program led to the creation of The Emergency Food Assistance Program. Today, TEFAP is the primary vehicle for distributing commodity foods to states that, in turn, distribute food-to-food banks and similar local food distribution agencies.

Each of these programs can be a vehicle for the use and distribution of dairy foods. However, several factors limit their effectiveness as a short-term response to a dairy surplus.

First, these programs are budgeted. Increased dairy purchases would supplant other food products. USDA may shift funding among various commodities, but many non-dairy foods have legitimate claims on available funds.

Second, these programs require planning, implementation, and execution. Programs that coordinate with state-run activities are subject to the timing, planning and discretion of the receiving state. Programs in which USDA works directly with an agency typically involve a spending and utilization plan of that agency. Schools, in particular, plan their budgets and menus early. Once in place, these plans are not often changed.

Third, the amount of dairy products that can be used and provided to these programs on a timely basis is limited. For example, storage space and refrigerator capacity to minimize spoilage are limited. In addition, since dairy processors must continue to service existing customers or risk losing their customer base, they cannot divert unlimited quantities to food assistance outlets.

Finally, increased use of dairy products in food assistance programs may substitute for commercial sales if recipients substitute the additional dairy products that they receive for dairy products that they would normally purchase through commercial channels. If this occurs, total utilization of dairy products does not increase and dairy producers don't benefit.

Congress can create funding and programs to respond to something like the dairy crisis of 2009, but once funding for food and nutrition programs are established the Secretary cannot easily alter the plan or find additional funding to support one specific agricultural or food sector.

International Food Assistance Programs

Several programs provide food to needy people in low-income countries on an ongoing basis or to provide emergency assistance in times of natural or other specific disaster. These include:

A. Food for Peace
B. McGovern-Dole
C. Food for Progress
D. Section 416(b)

Food for Peace (FPA) was authorized under the Agricultural Trade Development and Assistance Act of 1954. At first considered a temporary response to deal with agricultural surpluses, this program has

evolved to become a pillar of U.S. food assistance, considered a core program by advocates for low-income countries. The FPA has three titles, each with a specific objective and providing assistance to countries at a particular level of economic development. Title I is administered by USDA. Titles II and III are administered by the U.S. Agency for International Development (USAID). USAID is an independent federal agency that operates under the supervision of the Secretary of State.

For more information: (http://www.fas.usda.gov/excredits/FoodAid/pl480/pl480.asp)

FPA, Title I–Trade and Development Assistance, provides for government-to-government sales of U.S. agricultural commodities to developing countries. Agreements under the Title I credit program may provide for repayment terms of up to 30 years with a grace period of up to five years. Title I also allows for grant programs, which have outnumbered loans in recent years. Depending on the agreement, commodities provided under the program may be sold in the recipient country and the proceeds used to support agricultural, economic or infrastructure development projects there.

Since fiscal year 2006, new funding has not been requested because demand for food assistance using credit financing has fallen or grant programs have been a more appropriate tool.

FPA, Title II–Emergency and Private Assistance, provides for the donation of U.S. agricultural commodities to meet emergency and non-emergency food needs in other countries.

FPA, Title III–Food for Development, provides for government-to-government grants to support long-term growth in the least developed countries. Donated commodities are sold in the recipient country, and the revenue generated is used to support economic development programs. In recent years, this title has been inactive.

Although the Secretary of Agriculture is responsible for Title I uses of agricultural commodities, he or she needs funding in order to act. In recent years, advocates for international food assistance have urged Congress to provide direct cash subsidies that would allow foreign governments or approved agencies in foreign countries to buy food wherever they can find it most cheaply. While this approach enables the most total food assistance per dollar spent, it may not provide much support for U.S. agriculture.

The McGovern-Dole International Food for Education and Child Nutrition Program helps promote education, child development, and food security for some of the world's poorest children. It provides for

donations of U.S. agricultural products, as well as financial and technical assistance, for school feeding and maternal and child nutrition projects in low-income countries. The Foreign Agricultural Service of USDA administers this program, authorized by the Farm Security and Rural Investment Act of 2002.

Commodities are donated through agreements with private organizations, cooperatives, intergovernmental organizations and foreign governments. Commodities may be donated for direct feeding or, in limited situations, for local sale to generate proceeds to support school feeding and nutrition projects.

Under the Food for Progress Act of 1985, agricultural commodities are provided to developing countries and emerging democracies that are committed to introducing and expanding free enterprise in the agricultural sector. Commodities are currently donated to foreign governments, private voluntary organizations, nonprofit organizations, cooperatives, or intergovernmental organizations.

The implementing organizations request commodities and USDA buys those commodities from the U.S. market. USDA donates the commodities to the implementing organizations and pays for the freight to move the commodity to the recipient country.

Section 416(b) of the Agricultural Act of 1949, as amended, provides for overseas donations of surplus commodities acquired by the CCC. Donations are not permitted to reduce the amounts of commodities that are traditionally donated to U.S. domestic feeding programs or agencies or disrupt normal commercial sales.

Availability of commodities under Section 416(b) depends on CCC inventories and acquisitions. Programming varies from year to year. The commodities are made available for donation through agreements with foreign governments, PVOs, cooperatives, and intergovernmental organizations. Depending on the agreement, the commodities donated under Section 416(b) may be sold in the recipient country and the proceeds used to support agricultural, economic, or infrastructure development programs.

The Section 416(b) program is currently not active, as there are no CCC-owned commodities available at this time.

The assortment of foreign food export programs provides opportunities for the U.S. government to increase use of dairy products. However, that authority is tempered by budgetary constraints and by

concerns that the dispositions not be disruptive to recipient country economies or of world trade in dairy products.

Section 32, Public Law 74-320

In 1935, as part of its response to the hardship for agriculture during the Great Depression, Congress created a permanent authority to give USDA money from U.S. customs receipts (tariffs) to support farmers whose products were not otherwise covered or protected by more specific commodity policy. The Secretary has discretion in how to use Section 32 funds. The following is from a Congressional Research Service report written in 2006:

> *Section 32 of the act of August 24, 1935, authorizes a permanent appropriation equal to 30% of annual U.S. customs receipts (P.L. 74-320 as amended; 7 U.S.C. 612c). This money was first available to assist Depression-era producers of non-price-supported commodities. Section 32 funds, along with up to $500 million in any unobligated prior year funds, are to be used for (1) encouraging the export of farm products through producer payments or other means; (2) encouraging the domestic consumption of farm products by diverting surpluses from normal channels or increasing their use by low income groups; and (3) reestablishing farmers' purchasing power. The Secretary of Agriculture has considerable discretion in deciding how to achieve these broad objectives.*
>
> *.....Today [viz. 2006], most of this appropriation (now approximately $6.5 billion yearly) is transferred to the U.S. Department of Agriculture (USDA) account that funds child nutrition programs. Other Section 32 funds are used by USDA to purchase meats, poultry, fruits, vegetables, and fish, which are diverted mainly to school lunch and other domestic food programs. Several times in recent years, the Secretary of Agriculture also has drawn substantial amounts from Section 32 to pay for special farm disaster relief. This has added to the debate over how much flexibility the Secretary should have over use of the reserve, and whether the disaster aid has or could come at the expense of the other Section 32 activities.*

Excerpted from: Farm and Food Support Under USDA's Section 32 Program, by Geoffrey S. Becker; Specialist in Agricultural Policy; Resources, Science, and Industry Division; Congressional Resource Service; RS20235; 28 November 2006

Because the Dairy Price Support Program was defined to broadly assist the dairy sector, Section 32 funds could not be used to purchase or distribute dairy products. With the evolution of the DPSP into the DPPSP in 2008, an argument could be made that government support has now been legally restricted to commodity packaged butter, nonfat dry milk and cheddar cheese. Under this interpretation, Section 32

funds could support other dairy products, such as mozzarella cheese, fluid milk, or whey protein concentrate.

Section 32 does not create a program; it creates a fund of money. Thus, this money could be used in conjunction with existing programs that are designed for domestic food assistance, international exports or food aid. The legislative language "reestablishing farmer's purchasing power" suggests an even broader authority to, for example, compensate producers for losses caused by low prices. However, it is unclear whether Section 32 funds could legally be used to benefit the dairy sector since, even with the change in the DPSP, other programs, such as MILC, are specifically designed for dairy.

Farm Loan Programs

Recommendation 3:

The Secretary should work with the FSA in Washington and all state FSA Executive Directors and State Committee members, particularly those in states with significant numbers of dairy operations, to promote efficient and effective use of the FLP for dairy farmers. We especially encourage the use of the Guaranteed Loan Program with existing commercial lenders.

Apparently, some states leverage the Farm Loan Programs more effectively than others. We recommend that the federal FSA examine any disparities and develop strategies to share best practices across regions.

The definition of a "family farm" for purposes of extending credit under the FLP should be interpreted consistently in all states. Approximately 95% of the dairy operations in the United States are milking fewer than 500 cows. Most of those would meet the FLP definition of a family farm and would find the FLP to be a very beneficial source of credit during times when access to commercial credit is limited.

All state FLPs could extend the scope of their Guaranteed Loan Programs by building effective Preferred Lender Programs (PLP). PLPs make it much easier for commercial lenders to use FLP

Guarantees. PLPs make more efficient use of state FLP staff time by minimizing the loan processing involved in each guarantee.

Dairy industry stakeholders across the country should take the initiative to learn more about the federal loan programs available to producers and other agriculture-related businesses in their states. In addition to the FSA FLP, other federal agencies such as USDA Rural Development and the Small Business Administration have loan programs that may be helpful to dairy producers.

We recognize the critical importance of the FLP to our nation's dairy producers, especially when economic conditions make commercial credit difficult to obtain. The remarkably low default rate experienced in the FLP shows that funds invested in the program will be used wisely and will recirculate to provide help to even more farmers. We appreciate the Secretary's and Congress' work in providing additional funds for the FLP during the 2009 dairy crisis. We encourage the Secretary to also provide adequate staffing for the FLP. State FSA Executive Directors should be given the discretionary authority to temporarily re-assign county-level staff from commodity programs to the FLP during times of high loan demand. FSA Executive Directors should also be given the ability to temporarily hire assistance, such as experienced, retired commercial agricultural lenders to provide support to FLP staff during periods of strong demand. To achieve maximum efficiency of FSA staff, USDA could encourage state FSA offices to consider contracting out to the private sector for items like real estate and chattel appraisals.

USDA's farm loan program operates under the authority of the Consolidated Farm and Rural Development Act (7 U.S.C. 1936) and is administered by USDA's Farm Service Agency (FSA). FSA makes direct and guaranteed farm ownership and operating loans to qualified and eligible farmers and ranchers who cannot obtain commercial credit from a bank, Farm Credit System institution, or other lender. FSA loans can be used to purchase land, livestock, equipment, feed, seed, and supplies. Loans can also be used to construct buildings or make farm improvements. FSA employs farm loan officers who originate and service Direct Farm Ownership and Operating Loans. FSA works with banks and Farm Credit System institutions, providing guarantees on loans originated and serviced by those commercial lenders.

The USDA-FSA Farm Loan Program (FLP) is an important source of credit to dairy producers. FLP provides direct loans, guarantees on loans originated through commercial banks or Farm Credit

System associations, and interest assistance on operating lines of credit, as well as emergency loans in situations where farmers have been adversely impacted by severe weather conditions. FLP targets a significant portion of its funds to beginning farmers: 50% of Direct Operating, 40% of Guaranteed Operating, 75% of Direct Farm Ownership, and 40% of Guaranteed Farm Ownership. In addition to targeting beginning farmers, each state FSA FLP targets a percentage of their loan funds to Socially Disadvantaged Farmers based on state demographics.

In fiscal year (FY) 2010, $6.115 billion was appropriated for the FLP. As of September 3, 2010, the FLP had 33,541 loans in its national portfolio for a total of $4.913 billion. The maximum principal amount per borrower in direct loans is $300,000. The maximum total principal amount for direct loans plus loan guarantees is $1,119,000. This amount is adjusted annually based on inflation.

Approximately 52% of the loans in the FLP portfolio were Direct Operating Loans typically used for purchase of cattle, machinery, building construction, or other farm improvements. An additional 20% were Guaranteed Operating Loans originated and serviced by commercial lenders. Direct Farm Ownership Loans and Guaranteed Farm Ownership Loans used for purchase of farm real estate each accounted for 12% of the loans in the portfolio.

The top five states in FY 2009/10 in terms of number of new loan applications are listed below. New direct and guarantee loan volumes for the first eleven months of the fiscal year are in parenthesis.

1. Wisconsin ($419 million)
2. Minnesota ($309 million)
3. Iowa ($286 million)
4. Texas ($220 million)
5. Nebraska ($235 million)

Wisconsin FSA FLP Example

As Wisconsin is the largest customer of the Farm Loan Program, with by far the majority of its loans procured by dairy producers, we provide here a closer look at Wisconsin's successful use of the program.

The Wisconsin FSA FLP portfolio crossed the $1 billion threshold in early 2010. As of August 31, 2010, it held 4,956 loans for a total of $1.24 billion. Of these, 62% were direct loans and 38% were loan guarantees. Approximately 90% of FLP borrowers in Wisconsin are dairy producers.

The FSA FLP has, for many years, been an important source of credit for Wisconsin dairy producers. Wisconsin FSA FLP has historically been one of the top three among all states in both the number and the dollar volume of loans. FSA FLP has loan program managers assigned to cover every county in the state. They do an excellent job of outreach to farmers. They partner with many other entities that can help them more effectively serve farmers including the Wisconsin Department of Agriculture, Trade and Consumer Protection, Wisconsin Technical College System, University of Wisconsin School for Beginning Dairy and Livestock Farmers, and others. FSA has developed strong working relationships with commercial agricultural lenders to broaden the scope of its loan guarantee and interest assistance programs. In short, there are few agricultural borrowers or lenders in Wisconsin that are not aware of the FSA FLP.

As commercial agricultural credit became more difficult to obtain in 2009, the importance of the Wisconsin FSA FLP became even more pronounced. Lenders pointed many borrowers towards the FLP, and FLP loan volume in the state increased dramatically.

There are some key reasons that the FSA FLP works well in Wisconsin:

Wisconsin FLP has a high level of participation in the Preferred Lender Program (PLP), which allows experienced agricultural lenders to quickly obtain USDA Loan Guarantees with a minimal amount of paperwork. Subsequent review by state FSA FLP staff allows the private lender to conduct their business with minimal disruption of their normal operating procedures. FSA FLP monitors the aggregate performance of each lender rather than each individual loan application. Lenders with strong records of success maintain PLP status; those with higher losses are more closely scrutinized. (Many states have struggled to implement these loan guarantee processes.)

Wisconsin FSA FLP views itself as a partner with private agricultural lenders, and the lenders look at FSA FLP in that way as well. In many cases, the private lender has part of the financing package and FSA has part of the financing package. It is not an “either, or” situation.

Wisconsin FSA FLP contracts out to the private sector for many services such as real estate and chattel appraisals that assist their loan officers, which allows them to focus on the duties that only they can do. In the past, FSA FLP loan officers would have done these tasks. By contracting out for these services, FSA FLP has freed up its loan officers to serve new loan applicants and service their existing loan portfolios. This has allowed Wisconsin FSA FLP to be a national leader in loan-making, while keeping delinquencies and losses among the lowest in the nation. Wisconsin FSA FLP has centralized its loan liquidation process in the state office, which also frees up field loan staff to make and service more loans.

Despite maintaining a large loan portfolio with borrowers who were unable to obtain commercial credit, Wisconsin FSA FLP has experienced relatively low delinquency rates. In FY 2009/10, approximately 1.93% of the direct loan portfolio and 0.88% of the guaranteed loan portfolio was delinquent. By commercial lending standards, these delinquency rates are relatively low, particularly considering the poor economic conditions in the dairy industry during the period.

On a national level, Secretary Vilsack issued a letter at the height of the 2009 dairy crisis to all of FSA's dairy producer-borrowers informing them of the loan servicing options available to alleviate financial stress. These options included lifting milk check assignments to allow money to flow through for family living and operating expenses, deferring principal and interest payments, lowering payments through rescheduling or re-amortizing of debt, and other options. Many FLP borrowers contacted their loan managers to take advantage of the relief that was available.

Market News, Research, and Promotion Programs

Recommendation 4:

DEVELOP A SYSTEM THAT PROVIDES AN ACCURATE ASSESSMENT OF DAIRY FARM PROFITABILITY IN THE DAIRY INDUSTRY*. A data gathering and reporting system should be developed that expresses farm profitability in the dairy industry using an index to provide an impartial overview of the general level of profitability at the farm level based on the milk price-feed cost margin.*

Recommendation Notes:

In the chapter on alternative laws and programs, we offer additional recommendations that relates to the creation of new public information related to dairy markets and dairy sector performance.

Using this new measure, USDA should further determine threshold levels of dairy farm margins that indicate two levels of dairy farm distress. The first threshold should be at a level consistent with a cash flow coverage ratio of 1. The second should indicate more extreme distress such as experienced in 2009. This might be calibrated according to something like a cash flow coverage of 0.5 or calibrated according to a longer run measure of profitability, such as ROA or ROE.

Background Information

The dairy industry's progression towards fewer cows producing more milk from fewer dairy herds[16] shows no sign of slowing down and the present economy could well speed up the demise of many

16 Although the overall number of milk cow operations has declined since 2001, the number of operations with 500 or more head of milk cows has increased. Since 2001, the number of operations with 500 or more head increased by 20 percent, from 2,795 to 3,350 in 2009. The largest size group, places

large and small dairy farms. With the dairy industry relying more on an increasingly volatile world market with many low cost competitors, dairy farm profitability in the future may be based on the most 'efficient' dairies that can produce to meet the expectation of the most current business model within a changing global market. In assessing and tracking farm profitability the dairy industry is supplied with data from the USDA in a number of different forms. USDA provides reports that track cost of production[17] and cost of return per hundredweight (cwt) for both operating costs and total costs including hired labor, general farm overhead, taxes, insurance and other non-cash items which reflect a comprehensive business assessment but not necessarily in a format that dairy farm operators use to make decisions on their own profitability. USDA reports milk price to feed costs[18] monthly and though this measurement has been an historical easy tool to measure profitability, some recent research[19] has highlighted that in times of great volatility, even this measurement isn't accurate. The dairy industry is moving towards a more consistent, if still limited, measurement of farm profitability with a milk-price-feed cost margin, with a "margin" simply defined as the all-milk price minus feed costs. In the National Milk Producers Federation (NMPF) *Foundation For The Future* [20]plan this would be calculated as the

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with 2,000 or more head, showed the greatest percentage change from 2001, increasing from 325 places in 2001 to 740 in 2009, a gain of 128 percent. While larger operations were growing in number, smaller operations declined in number. Places with less than 500 head went from 94,665 in 2001 to 61,650 in 2009, a decline of over 33,000 operations, or 35 percent…. In 2009, operations with 500 or more head accounted for 5 percent of the total milk cow operations, 56 percent of the milk cows, and 60 percent of the milk production. USDA NAAS

17USDA ERS: Recent Costs and Returns, United States and ERS Farm Resource Regions, New Format and Regions

18 The milk-feed price ratio is the pounds of 16% protein mixed dairy feed equal in value to 1 pound of whole milk. The higher the ratio, the more feed a dairy producer could buy with proceeds from the sale of a pound of milk. Reported monthly by USDA, feed prices used in the ratio are based on current U.S. prices received for corn, soybeans and alfalfa hay

19 Understanding the milk-to-feed price ratio as a proxy for dairy farm profitability: CA Wolf October 2010, Journal of Dairy Science

20 http://www.nmpf.org/files/file/Foundation-for-the-Future-061010.pdf

margin of milk-over-feed cost on a dairy farm enterprise including feed costs for all milk cows, hospital cows, dry cows and replacement calves and heifers. The calculation will be done monthly using prices for corn, corn silage, soybean meal and alfalfa hay on the Chicago Mercantile Exchange (CME) preventing some of the delay currently being experienced in providing information for the feed adjuster in the Milk Income Lost Contract (MILC). Projected USDA National Agricultural Statistics Service (NASS) prices could also be used instead of average actual NASS prices. Generally, the projected prices are close to the actual average NASS prices, although the discrepancies are higher more recently with more volatile prices[21].

Discussion

The dairy industry is very diverse in their production practices, location, capital investment, overhead costs and expectations. Tax rates and the value of real estate will vary within the same county and will dictate different business and production methods to cash flow and obtain a return on capital. There is no single way to describe or measure dairy farm profitability and operators will use different criteria to measure it depending on their life goals, size, business structure and location. High prices do not ensure farm level profitability while more modest prices do not condemn farms to a lack of profitability. It is the relationship between revenue and costs (cash flow) that keeps farms in business and the return on equity – or return on assets or net worth - which will ensure the long-term profitability of the farm operation. There are many different production practices and, as with many small businesses, plenty of entrepreneurial initiative and innovation that make a single standard for farm profitability difficult to define. Answers to basic questions on family draw/income for a family where they are both manager and farm worker are answered differently, and farm families may be receiving public assistance for health insurance and food stamps but still see themselves as profitable enough to continue in dairy farming.

In assessing dairy farm profitability, lenders will use one criteria based on their standard loan practice and current government regulations. The USDA and other Federal agencies will choose differing criteria (for example, USDA Rural Development uses tangible net-worth) and for others the concept of farm profitability is to have access to enough milk at a price that ensures a competitive end product. In

21 Milk Income Loss Contract (MILC) Program [WWW] http://future.aae.wisc.edu/alliance/2012/MILC_full.pdf

2010 this confusion over lending standards has been compounded by the effects of increased federal regulation on lenders tied with a lack of lender confidence in the face of mixed signals from the dairy industry and anticipated federal policy.[22]

Farms can have positive cash flow but not be profitable. A common example of this situation is a farm that has been in the family for a long time, has no debt against it, and family living expenses are modest. A farm with positive cash flow but poor profitability can survive for some time through peaks and troughs in pay price/margins but is ultimately in a terminal condition. Another generation will not be able to purchase that farm's assets at market values and generate enough income to sustain the operation.

A farm can be profitable and yet have negative cash flow. An example of this situation might be a farm that carries a significant debt load but also has relatively strong milk production to support that debt. When milk prices drop precipitously, the farm operation may not have enough cash flow to cover operating expenses and debt service. If something isn't done quickly to adjust cash flow, short-term debt can accumulate to the point that it pushes the farm into bankruptcy.

For those operations that invest significant capital and employ managers to run their operations, profitability can be defined along standard business criteria around cost of production, return on assets and/or equity.

For those farm families who recognize that in order to cover their living expenses they need to supplement their income, a simple cost of production approach is enough so that the farm operations need only cover their costs because of the enhanced lifestyle benefits from living on a working farm. Many of these farmers are either beginning farmers[23] and/or second career farmers. This is the fastest growing sector of farm operators, with a fifth of all farms having a principal operator that is a beginning farmer. In

22Senate Banking Committee 12/1/10: Bair said that the FDIC would be open to creating guidelines specific to agriculture lending, similar to what they have done to ease mortgage and commercial lending.

23 USDA's definition of a farm encompasses a large number of different farming operations, and the beginning farmer definition is, likewise, broad. USDA's current definition of a beginning farm is one operated by a farmer who has operated a farm or ranch for 10 years or less.

this sector dairy averages about 17% of commodity production by beginning farmers, second only to poultry at 20%.[24]

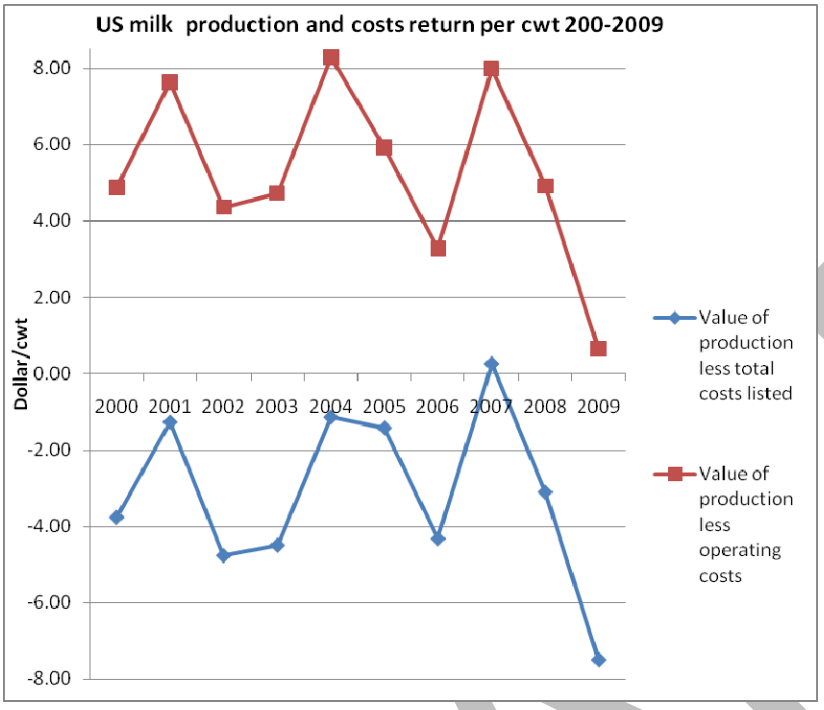
For those farms that self-classify as being in the '"agriculture-of-the-middle,"[25] farm profitability can come in many forms and with a mixture of different standard definitions. In good years, profitability may be a return on equity and in poor years it will simply be a question of liquidity. Quality of life and family values will also factor into the continuation of their farming operations.

USDA ERS track cost of production[26] and cost of return per cwt for both operating costs and total costs including hired labor, general farm overhead, taxes, insurance and other non-cash items. The chart below, based on USDA data, clearly indicates the collapse in 2009, but also shows the challenge to profitability using criteria based on balance sheet values during any year.

24 Beginning Farmers and Ranchers: Mary Ahearn, Doris Newton – Economic Information Bulletin Number 53 May 2007. http://www.ers.usda.gov/Publications/EIB53/EIB53.pdf

25 Over 80% of farmland in the U.S. is managed by farmers whose operations fall between small-scale direct markets and large, consolidated firms. These farmers are increasingly left out of our food system. If present trends continue, these farms, together with the social and environmental benefits they provide, will likely disappear in the next decade or two. The "public good" that these farms have provided in the form of land stewardship and community social capital will disappear with them. From a white paper by Fred Kirschenmann, Steve Stevenson, Fred Buttel, Tom Lyson and Mike Duffy.

26USDA ERS: Recent Costs and Returns, United States and ERS Farm Resource Regions, New Format and Regions



Milk price-feed cost margin

As the U.S. dairy sector becomes more integrated with global markets, the worldwide factors that affect supply and demand will tend to magnify volatility. Traditionally, dairy policies have been designed to improve farm operator' incomes by influencing the prices that producers receive for their milk. For example, price support programs were designed to raise the minimum prices received by all producers. In 2009, milk prices between January and October were low by historic standards, but not as low as the prolonged milk price trough during 2001-2003 (when the Class III price was below $12 for 21 straight months) – a period that, in retrospect, was bad, but not as bad for farm profitability and loss of dairy farm equity as 2009. In calculating profitability dairy farmers have the new cost of production dynamic of greater feed price volatility and higher cost, driven by increased competition for feed grains and petroleum products that is both global and permanent. It is worth noting that all the projected MILC payments for FY 2011 and FY 2012 are based entirely on the feed cost adjustor that was added to the program in the last Farm Bill.

Milk price-feed cost margin requires calculating the margin over feed costs on a dollar per cwt of milk basis. This is equal to the price received per cwt of milk minus the total cost of purchased feed

needed to produce a hundredweight of milk. Other production cost components such as labor, energy, depreciation, capital, veterinary services, and nutritional supplements vary greatly across individual operations and will need to be addressed by individual producers when determining their desired level of coverage. The role that feed costs play in the milk price-feed margin captures the volatility of feed costs paid by dairy farmers, relative to an average or expected level. Region-specific feed adjuster margins could also be explored (e.g. corn silage is used more frequently than alfalfa silage in some regions of the country). It is important that the measure used to calculate feed costs is adequately sensitive to the volatility or variability in the markets for feed components, as opposed to the actual level of these costs. In the analysis of their Dairy Producers Margin Protection Program (DPMPP), NMPF determined that for the period since 2000, the new DPMPP feed cost shows exactly the same level of variability as does the cost of feed to produce milk reported by USDA's Economic Research Service based on periodic farm survey data.

Conclusion

The DIAC recommends that a data gathering and reporting system should be developed that express dairy farm profitability in the dairy industry using an index to provide an overview of the general level of profitability at the farm level based on the milk price-feed cost margin. The milk-feed margin is determined for each month as the difference between the monthly price received by farmers for all milk sold in the U.S., the all-milk price, reported by USDA/NASS minus the monthly feed cost. While this index would not be representative of the profitability on individual dairy farms, it would serve as a better reflection of farm-level economic health than current milk-price-only measurements do. This would tie in with using the milk price feed cost margin calculation within the MILC and allow greater transparency and confidence in the process for farmers.

ANDY ADDITION TO GO SOMEPLACE BUT NOT HERE EXACTLY

Numerous programs support dairy market development, day-to-day dairy business decisions, and the ability of dairy businesses to plan. They do so by providing information on milk and dairy product prices, market conditions, and the market outlook. Such programs include the AMS Dairy Market News, various data serials published by NASS, ERS, and FAS, and special analytical reports by ERS and WASDE. USDA also has certain programs for market and business development and AMS participates in the oversight of the National Dairy Promotion and Research Board.

These programs typically provide valuable information for buyers and sellers in dairy markets. While valuable for the long-term profitability of the dairy industry, the programs cannot be easily used for short-term benefits.

There has been considerable discussion in recent months and years about two dimensions of market reports – mandatory reporting and electronic submission of data.

Although individual plant farm pay price reporting is required under Federal Milk Marketing Orders, these data are collected for purposes of enforcing price regulation, not to provided general market reports of prices. Most surveys of prices by NASS, AMS, ERS or other agencies are conducted on a purely voluntary basis. Some surveys are done with very formal attention to statistical survey techniques and some are very informal. Mandatory price reporting seeks to compel dairy businesses to report their price transactions so that the reliability of the marketwide results is enhanced. In a sense, this becomes a census rather than a statistical sample. The confidentiality of individual business records would be protected.

Electronic reporting of data is a tactical issue, but it is encouraged to facilitate the collection, dissemination, and use of market price data.

Congress has passed two laws related to mandatory price reporting. One was imbedded in the 2008 Farm Bill. Last Fall, the Mandatory Price Reporting Act of 2010 was passed, which extends and expands the price reporting requirements under the older legislation. It includes mandatory weekly electronic reporting for dairy products. As a result, USDA's Dairy Product Mandatory Reporting Program: (1) requires persons engaged in manufacturing dairy products to report certain information including the price, quantity, and moisture content where applicable, of dairy products sold by the manufacturer; and (2) requires persons storing dairy products to report information on the quantity of dairy products stored. The National Agricultural Statistics Service (NASS) collects such information for the program. The Agricultural Marketing Service (AMS) has implemented a plan to verify the price information submitted by dairy product manufacturing plants to NASS. Any manufacturer that processes and markets less than 1 million pounds of dairy products per year is exempt from the price reporting requirements.

Recommendation for the Use of Existing Programs in Times of Severe Economic Distress

> *Recommendation 5:*
>
> *The Secretary should develop a system of triggers and actions to guide his choices for special and emergency interventions, using existing programs.*

Barring legislative changes, the programs which permit the Secretary some flexibility in their application as emergency measures in times of critically low farm margins are the Dairy Product Price Support Program and one or more food assistance programs. If the Secretary can identify sources of funding, he could stimulate demand and thereby lift prices via either of these approaches.

Because movements of the DPPSP purchase prices disrupt commodity financial markets and the financial positions of farmers and others who have chosen to mitigate risk through those markets, as well as U.S. export markets; we suggest prioritizing food assistance programs over increasing DPPSP levels.

When dairy farm margins, as measured by the aforementioned margin measurement, decrease to the first trigger level, the Committee recommends that the Secretary guide food assistance purchases toward additional dairy products. USDA would temporarily be creating new demand for dairy products, which would exert upward pressure on dairy product prices and, therefore, farm level milk prices. The Secretary should ensure that government purchased dairy foods donations do not significantly displace commercial sales. Therefore, dairy foods should be provided to people who would not otherwise purchase them.

If dairy farm margin levels decrease to the second trigger level, the Secretary would have justification to increase the purchase prices under the DPPSP to levels that provide more revenue for dairy farmers. In the case of the DPPSP, extra demand would come from government purchases that aim to move cheese, butter, and/or nonfat dry milk off of the commercial market.

When the margin measurement methodology has been determined, appropriate margin trigger level(s) identified, and the corresponding DPPSP price level increases that would occur at those trigger levels set, USDA should publish those details. That way, potential future government interventions, such as increases in the DPPSP, can be considered and included in dairy farmers' personal milk marketing and

business decisions. Uncertainty around government intervention may tend to discourage farmers from protecting their own margin risk because of varying expectations around intervention.

Although the triggers provide a justification and a guide, the Secretary should maintain discretion as to whether to implement these measures. He should determine that conditions are a result of extraordinary shocks rather than predictable cyclical price swings. He should also develop standards that assure that the measures do not significantly or unavoidably harm export markets or commercial channels.

The Secretary should apply both of these approaches judiciously and rarely. If these approaches are used too frequently, they lose their effectiveness. We do not intend to indicate that this Committee supports continuation of the DPPSP. We merely intend to provide a framework around which the Secretary's existing authority should be applied.

As discussed in an earlier section, the ability of the Secretary to implement either of these actions may be constrained by the OMB. We encourage the Secretary to work with OMB in developing the rationale for emergency interventions before such actions become necessary, based on market conditions.

In Conclusion About Existing Programs

Numerous programs can be used to benefit dairy farmers and the dairy sector in times of stress. This includes programs to directly support prices or farm incomes and programs that more indirectly affect the demand for dairy products and thereby strengthen markets and prices.

In theory, all of these programs could be extremely helpful in times of economic stress, but in practice, these programs are not well suited to unanticipated stress and quick responses to emergency conditions. In many cases, the Secretary of Agriculture has no authority to change a program or operate it outside of a very narrow range of legislatively defined parameters. In some cases, the law grants the Secretary some discretion in defining a program's parameters, but when the Secretary's decisions have an impact on government expenditures, he or she must get approval from the President's Office of Management and Budget. Since its creation in 1922, this office has played the role of budget watchdog. While the specific economic policies and priorities of Presidents certainly change over time, OMB's job is to carefully and cautiously steward the resources Congress provides to the Executive Branch. Obtaining

permission to use discretionary authority for agricultural programs in general and dairy in particular can prove difficult.

The specific topics of dairy farm profitability and milk price volatility continue to be studied by the DIAC. The recommendations presented here are framed from the perspective of the DIAC charge only as it relates to current authorities. A further report will include recommendations for removing, adding or changing federal programs in order to provide a more comprehensive and long-lasting positive impact on dairy farm profitability and margin volatility than what is offered by current authority.

New Programs, Legislation and Regulation

Programs to Stabilize and Regulate Milk Prices

Dairy Product Price Support Program and Dairy Export Incentive Program

> *Recommendation 6:*
>
> *Explore elimination of the Dairy Product Price Support Program and the Dairy Export Incentive Program and use budget savings to enhance the safety net for producers.*

The DPPSP and DEIP programs were discussed in detail in the previous section. While these programs have some merit and should be used until alternatives are in place, the committee believes that their effectiveness has become limited and that the resources tied up in them could be better used for other programs. These other programs will be more fully discussed in the section on price stabilization programs.

Federal Milk Marketing Orders

> *Recommendation 7:*
>
> *REVIEW FEDERAL MILK MARKETING ORDERS. The Secretary of Agriculture should appoint a committee to review implications of Federal Milk Marketing Orders, including their implications on volatility, inefficiency, and dairy farmer profitability, and to recommend reforms.*

Federal Milk Marketing Orders, as they currently exist, were discussed in an earlier section of this report. We have recommended that the Secretary initiate a further review and analysis of the current

program to analyze the operations of the FMMO system, including, but not limited to, end-product pricing's impact on milk price volatility and impact of classified pricing and pooling on processing investment, competition and dairy product innovation. We also note that Congress authorized the creation of a Congressional "commission" to review Federal Milk Marketing Orders. Although it was subsequently decided to not pursue this commission, our experience leads us to better appreciate the need for a focused effort, involving people who are deeply familiar with the intricacies of this complex regulation.

Testimony received by the DIAC and our own personal experiences suggest that there are advantages and disadvantages to classified pricing and pooling, which are the essential tools of FMMOs. Similarly, there are positives and negatives in the specific implementation of these tools that currently exist in FMMOs. Although we believe that FMMOs provide many benefits to the dairy sector, there legitimate question around the merits of the system in general and the net benefits of some of its current structure. In particular, we believe it is especially important to carefully study and evaluate the possible role of end-product pricing and pooling in exacerbating milk price volatility and/or discouraging dairy product innovation.

Recommendation 8:

STRONGLY CONSIDER THE ELIMINATION OF END PRODUCT PRICING. Alternative measures to current end product pricing system such as, competitive pricing, and mandatory price reporting should be explored.

This recommendation goes a step beyond the previous recommendation, which calls for a review, by more firmly stating our skepticism of the merits of the current use of wholesale prices of four dairy commodities to establish the minimum prices paid for milk under FMMOs. Competitive pay price proposals were received from the National Milk Producers Federation and the Maine Milk Commission. Other testimony spoke to the need for a new system of price discovery in FMMOs or even more generally. The NMPF and Maine Milk Commission Proposals have a similarity of purpose but work in very different ways. Determining whether one, the other, or a third approach is best is beyond the scope of our committee effort. However, we believe these ideas have merit and deserve particular review and

attention. The objective should be to simplify the dairy price regulation and use a system in which all participants would have a high degree of trust and confidence.

> *Recommendation 9:*
>
> *COLLECT AND PUBLISH PRICE DATA. USDA should collect and publish data on alternative measures of a competitive pay price, considering but not limited to the proposals of the National Milk Producer Federation and Maine Dairy Industry Association.*

We have also previously discussed ongoing and new efforts at price and market news reporting. A new system of weekly, electronic reporting will be implemented in the coming months. We applaud this effort and encourage USDA and industry members to use it and evaluate its usefulness over the coming year.

Beyond the current plan to survey dairy product prices, we encourage USDA to collect and report data on actual prices paid by dairy processors. Such information would assist members of the dairy industry in better understanding the possible consequences of switching to a competitive pay price approach in establishing FMMO minimum class prices.

Growth Management

> *Recommendation 10:*
>
> *ADOPT A GROWTH MANAGEMENT PROGRAM. The federal government should adopt a growth management program that allows new producers to enter and allows producers to expand production.*

Industry advocacy groups have put several supply management plans forth in recent months. Although the underlying causes of milk price volatility continue to be debated, it has been incrementally increasing since the early 1990s. A prolonged period of volatility in 2008 and 2009, however, brought this trend to the forefront. The inordinate price swings during this period contributed to inadequate income for dairy farmers.

The dairy industry needs a new mechanism to reduce boom-and-bust cycles, with the objectives of reducing variation in milk prices and farm income. Reputable studies reveal a properly designed and managed growth management plan could do just that.

To be effective, the plan must first allow for natural, long-term production growth, in line with the underlying growth in domestic and world demand. A plan must provide for the natural exit of existing producers and enable new producers to enter the industry. Both are needed for the U.S. to maintain a viable dairy complex. The plan must also reduce milk price volatility; have little impact on import and export activity; be national and mandatory; and reduce the cost of government-led counter-cyclical dairy programs.

If the program meets these criteria, it would reduce volatility without artificially raising the cost of milk. Through this inherent stability, there would be more long-term transactions between dairy producers and manufacturers. This should reduce the occurrence of product reformulation and menu displacement with non-dairy alternatives that may be less costly.

Although there has never been a Federal mandatory dairy supply management program, with the exception of assessments, Federal policy actions in the early 1980s attempted to reduce milk supplies during a tenuous price period. Cooperatives Working Together (CWT) is a voluntary supply management program operated by several of the nation's dairy coops and independent producers as a way to reduce domestic supplies of milk and/or dairy products. It is useful to review these and other supply management programs as the committee debates the future direction of U.S. dairy policy. To this end, an extensive review of supply management programs, including temporary US programs, programs used in other countries and proposed programs, is presented in Appendix B.

Thus far, two programs have gained the most attention from producers, policy makers, and policy analysts. Both of these programs differ from the supply management programs described for other countries in significant ways. In 2010, Representative Jim Costa (D-CA) introduced H.R. 5288, "The Dairy Price Stabilization Program of 2010." A companion bill, S. 3531, was introduced by Senator Bernie Sanders (D-VT) and is similar in many ways. The Costa-Sanders bill was the outgrowth of

"growth" management proposals offered by the Milk Producers Council of California (MPC)27 and the Holstein Association USA. In conjunction with NMPF's margin protection program, the organization has proposed a mandatory supply management program called the Dairy Margin Stabilization Program.

Scott Brown at the University of Missouri-FAPRI and Charles Nicholson and Mark Stephenson (formerly at Cornell University and now at The California Polytechnic State University-SLO and University of Wisconsin, respectively) presented analyses of these plans to the DIAC. They analyzed NMPF's FFTF as a collective package, including the replacement of price supports and MILC with margin insurance in combination with the market stabilization plan. The Costa/Sanders Plan adds a growth management program to the existing programs, including the DPPSP and MILC.

The "Key Results" from the Nicholson/Stephenson study28, edited to focus on FFTF, are:

- The program would reduce milk price volatility significantly compared to the Baseline, both with and without shocks. Under the assumption of large shocks, the program would reduce the average absolute deviation from $1.75/cwt to $1.13/cwt.
- Cumulative milk production from 2010□18 would be reduced by 0.4% to 0.5% (range with and without shocks).
- The program would reduce government expenditures for dairy programs significantly. Under the assumption of large shocks, government expenditures would be reduced from about $3.2 billion over 2010□18 to $1.6 billion
- The program would increase the average All-Milk price by $0.17/cwt without shocks, and by $0.06/cwt with shocks. These price enhancement effects occur because FFTF spends collected monies on demand enhancing activities (modeled as food donations through non-□commercial channels);
- The programs would have different effects on net exports of American cheese, NDM and dry whey. Under the scenarios assuming the large shock, the FFTF would reduce average monthly net exports of American cheese by 22% compared to the Baseline. Net exports would continue to grow under the programs, just at a slower rate than under the Baseline. Moreover, the lower exports under FFTF would be offset to some degree by additional purchases for domestic markets. Average monthly dry whey exports would be reduced by 2.8%

27 Vandenheuvel, R. and S. Vander Dussen. "Dairy Price Stabilization Program." April 2010. Presentation to DIAC.

28 Nicholson, C. and Mark Stephenson. "Analysis of Proposed Programs to Mitigate Price Volatility in the U.S. Dairy Industry." Cornell University. September 2010. Presented to DIAC.

- The impact of the program on cumulative fluid sales during 2010-18 would be [a decline of] 0.4%. FFTF would reduce cumulative American cheese sales by 0.7%. Reductions in cumulative other cheese sales would be 0.3% for FFTF.
- The programs would have different affects on Class III and IV prices. Due to purchases of American cheese, the FFTF program tends to enhance Class III prices compared to the Baseline (an average over 2010--□18 of $0.57/cwt for the scenario assuming large shocks. Average Class IV prices are lower under FFTF ($0.04/cwt) compared to the Baseline for the scenario assuming large shocks, which implies a larger average price spread between Class III and IV.

Nicholson/Stephenson concluded that FFTF would be effective in reducing both price volatility and government spending. It does have the potential to negatively impact net exports, but that could be somewhat compensated by DMSP product buy-up provisions under their assumptions.

As noted in their fourth bullet, the price enhancement generated by the model is related to the additional demand that is generated through purchases and donations of products with the money collected from producers who market milk in excess of the targeted production under the program. The pool of funds that would be generated through this provision or the level of 'new' demand is not identified. Absent specific guidance in FFTF, they assumed that 80% of the fund would be allocated to cheese purchases and 20% would be allocated to dry milk purchases, resulting in the increase the model generates in Class III prices concurrent with the reduction in Class IV prices. These price impacts are based upon a complete market isolation assumption. They assume that no donations would displace commercial sales. This assumption warrants further review in the context of studies showing that government donations have historically resulted in some levels of commercial displacement.

They also attempt to model responsiveness of producers to the pay price reductions. In the baseline scenario, they assume a percentage of milk that would have otherwise been marketed without DMSP. Although Nicholson/Stephenson do not elaborate on the size of that milk volume, they state:

"We assume that a proportion of milk that was receiving the no-payment penalty when the program was triggered would continue to be marketed under the program. We assumed that 35 percent of the penalty milk would continue to be marketed, but that adjustments to milk production and marketing would also be made over time in response to reduced profitability.

Nicholson/Stephenson then run two scenarios that show producers being more responsive to the no-pay provisions. In the scenario where producers make a full and immediate permanent reduction in supplies when the penalties go into effect, the average All-Milk price is $0.31 higher than the baseline at

$15.63/cwt and is $0.14 higher than the scenario assuming a 65% reduction in milk volumes in the penalty zone. Average deviation is reduced from $0.83 to $0.63/cwt but is higher than the $0.35 deviation shown in the 65% reduction scenario. Total milk marketed drops by 26 billion pounds. They note that the full and permanent immediate adjustment is unlikely. In the second scenario, they similarly assume a full and immediate permanent reduction in supplies when the penalties go into effect but they adjust the margin level that triggers the penalties from $6.00 to $4.95. That program sees the average All-Milk price reduction of $0.45 from the baseline to $14.87/cwt and decreases price deviation to $0.36/cwt. They note that this scenario results in similar price patterns to the $6 margin trigger with a 65% reduction in penalty marketings.

This issue of producer responsiveness is a key assumption. It would be helpful to see the model results if the production adjustments are less than the 65% reduction. This 65% assumption is worthy of further consideration in the context of the historic experience with the various attempts to incent production adjustments in the U.S, such as the limited success of the various assessment schemes. The over-quota pricing ($1.70 discount) in California can be viewed as an 11% penalty at $15 quota milk prices and it has not stopped new dairies with zero quota from being built. A 65% reduction in penalty volume under FFTF when the maximum penalty is 8% and producers have an opportunity to build their base and avoid future penalties by continuing to market their full production through the period seems inconsistent with those experiences and warrants further discussion.

An additional assumption that needs to be better understood in the FFTF analysis is the nature of the reductions in marketings during the penalty periods in the 65% reduction scenario and the assumptions around marketings immediately after those penalty periods. Marketings rebounded quickly after the Dairy Diversion Program of the 1980s as noted earlier. Many producers under contract reduced marketings through adjusted feeding practices or on-farm milk diversions and were fully equipped to resume full marketing levels once they came out from under their contracts.

Although the questions around these assumptions may drive the discussion toward altering the FFTF parameters to be more binding, it is important to note the Nicholson and Stephenson response to the question “What are the risks of supply management programs? What are the possible unintended consequences? What are your key data points for cost-benefit analysis—what are the things to look at?

You have done a lot of sensitivity analyses. What could go wrong? How do you calculate those probabilities?":

"The supply management programs, as crafted by various industry players, have been careful to attempt to only dampen price volatility with particular emphasis on not altering long-run average prices, maintaining a competitive position in export markets and not creating intangible assets in quota value. But the supply management components of any program provide tools that could be implemented more strongly to enhance prices and confound those goals."29

Analysis by Scott Brown at University of Missouri's Food and Agricultural Policy Research Institute (FAPRI)[30] concludes that the FFTF would help smooth out the peaks and troughs of milk prices:

"The program will in effect reduce high price periods that result after the loss of too many producers from the low margin period. Though demand shocks will still result in price volatility for the industry in the future, the FFTF program will moderate the range of producer margins that would be experienced without the program"

Brown concludes, "The DMSP feature of the FFTF program will provide another lever to help correct times of low margins. The FAPRI baseline has few observations that result in a triggering of the DMSP but in those periods of low margins, producers will be given a signal that supply adjustments need to occur. The base feature under DMSP will allow for industry expansion as needed to account for demand growth, since the base production level under DMSP is a rolling average of the three most current months." FAPRI's findings bring up an important question when analyzing any of the potential policy options: how responsive will producers be to the market and policy signals?

FAPRI's analysis includes both the Dairy Market Stabilization Program and the Dairy Producer Margin Protection Program. FAPRI's report acknowledges a relationship between the DPMPP and supply control program but does not elaborate on the extent that supply controls help reduce program

29 Nicholson, et al. "Responses to Additional Questions Requested by the Dairy Industry Advisory Committee", December 6, 2010.

30 Brown, S. "Analysis of NMPF's Foundation for the Future Program." June 2010. FAPRI-MU Report #05-10

spending. Additionally, few trade outcomes are presented. The analysis shows an increase in milk powder exports but does not detail trade changes in other product categories.

While the declines in price volatility are positive outcomes, troubling aspects of these results are net export declines in categories under this program. Export markets have significantly helped milk price recovery in 2010, as the U.S. is now exporting nearly 12 percent of all production on a solids basis.31 Some believe that the Dairy Price Support Program has held the U.S. back from exporting products for decades. The fact that FFTF shows net export declines from current programs, including the DPPSP, could jeopardize the U.S. dairy industry's ability to become a consistent exporter.

Since both FAPRI and the Nicholson/Stephenson studies analyzed Foundation for the Future as a comprehensive program, it is difficult to discern which policy levers are actually driving the model changes – the margin protection program or the supply control program. Disaggregated analyses would be instructive to the committee.

Other potential concerns about supply management include the following:

- Stifling investment in processing and manufacturing plants and new product development due to uncertainty of production levels.
- Potential to retard development of milk supplies in regions that are deficit, even if supply and demand conditions support development of additional milk supplies in that region.
- Potential that proposals will introduce increased volatility if intervention lags result in corrective action occurring concurrently with or subsequent to market correction.
- Devaluation of livestock by decreasing cattle demand due to reductions in expansion cattle market.
- Inhibiting the farmers' ability to manage risk by increasing production when needed.
- The potential of increasing imports and decreasing exports.
- The potential to incent market disruptive behaviors at the end of measurement periods, such as:
  - Dumping skim
  - Moving cows
  - Reduced marketings
- The unintended consequence of driving a race for the base mentality, incenting producers to increase production during periods in which penalties are not incurred.
- The potential that supply management inhibits growth of dairies to the scale necessary to address environmental and global competitiveness requirements.

31 USDEC Estimate, Jan – Jul 2010.

The potential that supply management may increase volatility by forcing greater uniformity in production decision-making than exists today.

Taken as a whole, the subcommittee is concerned that supply management is 180 degrees in the opposite direction of the growth-driven strategies that most industries undertake to create a dynamic and thriving industry.

These remain issues that are worthy of further discussion.

The DIAC is not prepared to recommend a specific plan; however, we agree that a primary challenge in taming milk price volatility is to better coordinate milk marketings with milk usage over time. Whether this can be done with purely private, market mechanisms is a debatable point. Clearly such has not happened to debate, although CWT has certainly been a collective producer effort with that intent. We agree that achieving better discipline on matching growth in milk marketings to market needs is essential to improving milk price volatility and encourage USDA, Congress, and industry organizations to continue to work on developing new tools to achieve that objective.

Programs to Protect and Stabilize Farm Incomes

Price and Income Risk Management

Recommendation 11:

SIMPLIFY AND IMPROVE RISK MANAGEMENT PRODUCTS FOR DAIRY FARMERS. USDA should continue to simplify and improve Livestock Gross Margin-Dairy and Adjusted Gross Revenue-Lite in order to make them more accessible and easier for dairy farmers to use and adapt Livestock Risk Protection for use by dairy farmers. Risk management education should be expanded.

Background Information

USDA's Risk Management Agency (RMA) offers two risk management tools that are designed to help dairy farmers. One is designed specifically for dairy farmers and is called LGM-Dairy. Another is a program available for any type of farm is referred to as AGR-Lite. Few dairy farmers have participated in these programs.

Discussion

LGM-Dairy, introduced in 2007, is a bundled hedging tool that provides protection to dairy producers for the difference between feed casts and milk prices. Rather than having to hedge milk prices

and feed prices separately, LGM-Dairy establishes a floor on gross margins (milk price minus feed costs) and pays an indemnity if the margin falls below the established floor. The farmer chooses how much of his or her milk to cover and the month of the coverage. Premiums are based on expected milk revenue and expected feed costs that are calculated using futures market prices on Class III milk, corn and soybean meal at the time the insurance is purchased. While any given farmer's milk revenue or expected feed costs will not equal the futures prices, his or her margin changes are expected to correlate closely enough to futures price movements to make the tool useful for reducing risk.

Unlike futures contracts, LGM-Dairy does not require a minimum amount of milk. Producers may sign up for this program monthly and may choose to cover up to eleven months of production at a time. Farmers may not purchase insurance for margins on more than 24 million pounds of milk over that period.

Recently, RMA announced several changes to how they would administer LGM-Dairy. The new LGM-Dairy uses a different procedure for calculating milk returns over feed costs that may correlate more closely with farmers' actual margins. The new program also encourages producer participation by providing a subsidy to lower the premium costs for farmers.

In 1998, RMA developed a new insurance product intended for all farmers and based on adjusted gross income (AGI) as reported on Schedule F (Profit or Loss from Farming) Form 1040. The program combined protection from production losses related to natural causes with output price declines or input price increases related to market fluctuations. The product became quite complex and was difficult to use. AGR-Lite was developed in 2002 to provide a simpler tool that would have the same goal. Any farmer can use AGR-Lite and the revenue protection applies to the whole farm, not one product. Premiums are lower for farmers who sell more products because their expected total margin risk is reduced by that diversity.

Participation rules are not particularly conducive to dairy production. No more than 35 percent of farm income can come from animals or animal products. Milk marketings are limited to 1.6 million pounds. The program only includes the cost of feed that is purchased, not feed that is grown. Total farm liability cannot exceed $1 million and gross income must be below $2,051,282.

Farmers select the coverage percentage of their total adjusted gross income and the percentage of the difference that they can receive if their actual adjusted gross income (AGI) is less than the selected

income coverage level. The maximum income coverage is based on each producer's average AGI over the previous five years.

Although they are similar, the LGM-Dairy and AGR-Lite approaches to income protection differ beyond the fact that one is tailored to dairy and the other is designed for diversified farming operations. LGM-Dairy works on the basis of a price spread, the difference between the price of milk and the cost of feed expressed relative to an amount of milk produced. The resulting margin is expressed in dollar per hundredweight. AGR-Lite is based on the concept of income less production expenses, where both vary with the amount of milk produced (and other agricultural sales) and the amount of feed (and other production inputs) purchased.

Few dairy farmers have participated in either of these programs. Several factors explain this lack of participation. Size limits, market conditions, and program design and targets all contribute to their low participation by dairy farmers.

Conclusion

The Committee recommends that USDA continue to simplify and improve the LGM-Dairy and AGR-Lite programs in order to make them easier for dairy farmers to use. Current feedback from the farm community is that these programs are much too complicated and involve too much paperwork. The limiting factors described above should also be addressed in order to develop these programs into valid risk management tools for dairy producers.

In addition, these programs would greatly benefit dairy farmers if they could, in addition to providing risk management mechanisms, provide comprehensive education on risk management. Because volatility in the dairy industry is a relatively new experience (less than 20 years) for many farmers, it is understandable that farmers are unsure of whether or how to manage their own risk. USDA risk management programs could provide a valuable tool to dairy farmers simply by providing that education, regardless of the actual risk management tools used.

Risk Management Margin Lines of Credit

> *Recommendation 12: ESTABLISH RISK MANAGEMENT MARGIN LINES OF CREDIT. USDA should establish credit facilities through their direct lending and credit guarantee programs for cooperative or proprietary first buyers of milk to cover the margin deposits required on contracts for risk management executed on behalf of producers of raw milk.*

Background Information

Given the inherent price and margin volatility that will continue to be associated with dairy markets in the context of volatile farm input prices and increased participation in the global market, risk management tools available through the futures markets will play increasingly critical roles in managing price and margin risk for dairy farmers, manufacturers and end users. These tools can be used in a variety of ways, such as locking in a margin or a price through the use of futures contracts or protecting against unfavorable price levels through the use of options contracts.

In contrast with other segments of agriculture in which robust futures markets have existed for decades, use of futures instruments to manage price and margin risk in the dairy industry has largely been limited to the period since cash-settled dairy futures were introduced in 1997. Several factors, including lack of historical experience, minimum contract sizes that exceed some individual farm's production, complexity, and margin requirements limit direct participation by farms in futures market risk management activities. The cooperative or proprietary buyers of milk from producers can overcome many of these obstacles through offerings of forward price programs. The buyers can bundle volumes of milk that are smaller than the minimum future or option contract size in order to facilitate risk management on behalf of their small producers. Additionally, the risk management activity of the producers can be directly incorporated into producer payments, eliminating the need for producers to track separate futures contract settlements. And perhaps most significantly, these first buyers of milk can manage the margin calls on behalf of producers, eliminating an often time-consuming and stressful component of direct hedging by producers.

Discussion

Margin in the context of the futures markets is the amount of money that must be on deposit by both buyers and sellers of futures contracts to ensure performance of the terms of the contract. It is one of several mechanisms that the exchanges use to address the credit risk that might otherwise exist across anonymous counterparties. Initial margin is required upon initiation of a buy or sell position, and further margin may be required over the lifetime of a futures position when the price of the futures contracts held by a party is unfavorable to the current futures market prices. Maintenance margin is the minimum equity that must be maintained for each contract in a customer's account subsequent to the deposit of the initial margin. Minimum initial and maintenance margins are set by the exchange for each market but individual brokerage firms may require margin deposits at higher levels than the exchange minimums.[32] The margin requirements for the milk contracts traded on the CME were recently changed and provided in the following table:[33]

	Effective Date	Initial Rate per Contract ($)	Maintenance Rate per Contract ($)
Class III Milk Futures	Dec-10	1,080	800
Class IV Milk Futures	Nov-10	810	600
Class IV Milk Futures	Jan-11	1,080	800
Class IV Milk Futures	May-11	1,350	1,000

A party's margin account is adjusted daily based upon the difference in the value of the futures contracts being held and the daily settlement price, a process that is referred to as "mark to market." For example, if a dairyman sold a Class III milk future contract for $15 and the daily settlement price for that contract is $18, he would have been required to wire transfer the $3 difference to his broker in order to maintain the minimum maintenance margin account. If, in contrast, the daily settlement price for that

32 Plourd, Phil. From Price Taker to Price Maker. Coffee, Sugar & Cocoa Exchange, 1997. Pp. 115-122.

33 CME website. CME Margin Requirements

contract is $12, he would have been credited the $3 difference in his margin account. The calls from the brokerage firm to a customer to bring margin deposits up to a required minimum level are referred to as margin calls. This is a simplified example; in actuality, the adjustments in the margin account happen daily.

Margin calls are obstacles to direct dairy producer hedging because of the logistical challenge of having to monitor their positions daily and arrange for a transfer of funds to their broker daily when they have sold futures at a price below the current price in an upwardly moving market. The logistical and emotional stress of responding to margin calls is sufficient to keep many producers from managing their milk price risk directly. Additionally, margin requirements can tie up a significant amount of cash in a dairy operation.

Programs offered by milk buyers, both cooperative and proprietary that overcome the obstacles to risk management are critical to increasing the utilization of risk management by producers. However, the ability for many entities to offer these programs that facilitate producer risk management could be constrained by margin call encroachment on credit facilities. Even having only half of their producers manage price or margin risk on half of their milk could generate millions of dollars in potential margin calls per day for some cooperatives. This working capital may be out of reach for some, even though the margin costs are not true operating costs of the cooperative or proprietary buyer of milk. Rather, the margin account value (plus or minus) is reflected in the milk price paid to the producers who contracted for the forward price or margin. As a result, the risk associated with default on the debt associated with the margin calls is minimal.

Conclusion

Volatility will continue to be a factor in the dairy markets due to several factors. These include the biological nature of the production system, the stickiness in supply and demand adjustments, interplay with international markets, and budgetary considerations that constrain the implementation of price supports at levels that significantly reduce volatility. Therefore, full consideration should be given to managing the risks associated with price volatility through market-based and/or public policy solutions. The recent experience in which some grain merchants have reduced their offerings of forward contracts and other risk management programs to producers because of margin calls suggests that margin risk on future contracts could be limiting the availability of risk management tools to producers.

The Committee recommends that USDA establish a credit mechanism to facilitate risk management margin lines of credit to first buyers (cooperative or proprietary) of milk. These lines of credit should be available through the direct lending or credit guarantee program. Funds that could be borrowed against the line of credit would be restricted to funds required to cover margin calls associated with bona fide risk management activity documented by contracts between the first buyers and producers of raw milk.

Modified MILC and Margin Insurance

Recommendation 13:

MODIFY MILK INCOME LOSS CONTRACT PROGRAM AND PROVIDE A MARGIN INSURANCE OPTION using funds from the elimination of the DPPSP. We recommend the continuation of MILC, with a production cap based on available funds, with two important modifications: (1) use an all-milk income/feed cost margin trigger, and (2) provide an insurance program for production excluded by the cap to provide protection for larger producers.

[Tabled pending model analysis: ADOPT A MARGIN INSURANCE PROGRAM. Revise the MILC with a margin insurance program and eliminate DPPSP. The margin would be calculated as net return to milk production less feed cost. Three levels of insurance would be offered – 50%, 65% and 80% of the average margin from 2005-2009. The cost of coverage at the 50% level would be fully subsidized. The first 4 million pounds of covered milk production would not be charged a premium at any level of

protection. The cost of coverage above 4 million pounds between the 50% and 65% level would have a partial producer responsibility. The cost of coverage above 4 million pounds between 65% and 80% level would be totally charged to producers.]

Background Information

The committee supports the inclusion of a dairy farm safety net in the 2012 Farm Bill. The primary programs that are typically classified as safety net programs are the Dairy Product Price Support Program (DPPSP), countercyclical payments (currently Milk Income loss Contracts/MILC) and margin insurance programs.

Dairy Product Price Support Program (DPPSP)

The DPPSP and its predecessor, the Dairy Price Support Program, has long been a cornerstone of U.S. dairy policy. The dairy price support program as efficient from the perspective of the potential to increase farm income by greater than the government outlays.[34] At times, the support prices have been set at levels at or above the farm cost of production, stimulating surplus. More recently, however, the price has been set well below the farm cost of production at a level that would be considered a safety net against catastrophic market prices.

The DPPSP has been criticized for the following:[35]

It reduces total demand for U.S. dairy products and dampens our ability to export, while encouraging more foreign imports into the U.S.
It acts as a disincentive to product innovation.
It supports dairy farmers all around the world and disadvantages U.S. dairy farmers.
It isn't effectively managed to fulfill its objectives.
The price levels it seeks to achieve aren't relevant to farmers in 2010.

Further implications of DPPSP are:[1]

34 Madison, Milton. "Farm Service Agency Programs." April 2010. Presentation to DIAC.

35 Kozak, Jerry. "Foundation for the Future." April 2010. Presentation to DIAC.

While purchases boost milk prices in the short term, USDA must store and dispose of a perishable product that if allowed to enter commercial channels will lower producer milk prices.
DPPSP may discourage ingredient use by food manufacturers and stifle new dairy product development.
Imports may substitute for higher-priced domestically produced product.

The Innovation Center for US Dairy also identified the DPPSP as the highest priority item that needs to be reformed in order to transition the U.S. industry into being a consistent exporter.[36]

Milk Income Loss Contracts (MILC)

The MILC counter-cyclical payment program is also described earlier in this report and the basic parameters will not be further elaborated here. This program is largely supported by producers whose volume falls within the eligible production limitation of 2.985 million pounds of milk production per fiscal year. The limit on eligible production results in disparate benefits to producers, depending upon size. Producers for which the eligible volume represents a de minimus portion of their total production tend not to favor the program. These producers are largely reliant on market values which, to the extent that MILC payments limit the response to low milk prices by smaller producers, can remain at lower levels for longer periods when payments are triggered.[1] The view of mid-sized producers toward the MILC is largely contingent upon their perception of the net benefits of the program to them. In other words, it is based upon their perception of whether the MILC payments from the federal treasury on their eligible volume offset the reduction in market-based milk income on the ineligible volume.

Some processors and economists are critical of MILC's interference with market signals that would otherwise result in a more timely market correction in low price periods.[1] Additionally, the eligible volume limitation, by its nature, interferes with market signals across dairy farm operations by creating an artificial bias toward operations in which the federal payments outweigh the reduction in market price. This bias may translate into the preservation of milk production with a higher underlying cost structure.

36 Suber, Tom. "The Impact of Globalization on the U.S. Dairy Industry." June 2010. Presentation to the DIAC.

Margin Insurance

LGM-Dairy is one form of margin insurance that is currently available and is described earlier in this report. This bundled hedging tool offers producers the opportunity to insure the difference between the price received for Class III milk and their cost inputs in soybean meal and corn equivalents. LGM-Dairy has experienced slow adoption rates due to program complexity, lack of insurance carriers, high cost of policies, lack of a federal subsidy, requirement to have full premium upfront, requirement for verification of target marketings, and general inexperience of dairy producers with margin insurance concepts. In reinsurance year 2009, only 40 policies were sold that earned a premium. Roughly forty million pounds of milk was covered by the program, equivalent to 0.02% of total U.S. production, accounting for $4.7 million liabilities. Data from the first three and a half months of 2010 has shown a marked increase in the use of the program. From January 1 to March 18, 2010, 92 policies were sold covering 1.38 million pounds of milk and $18.3 million in liability.[37]

RMA announced changes on October 26, 2010 designed to make LGM-Dairy more user-friendly.[38] For policies sold after December 17, 2010, premiums are due at the end of the coverage period rather than at the beginning. This allows the premium to be deducted from the indemnity. Higher deductible levels are also now offered. The maximum deductible level increased from $1.50/cwt. to $2.00. Producers are better able to cover a minimum gross margin, which is comparative to catastrophic coverage. Allowable feed ranges have also been changed to better customize feed rations for an individual producer. Importantly, a subsidy has also been added for producers purchasing multiple months of LGM-Dairy insurance. The level of the subsidy is based upon deductible level selected, ranging from 18% for a $0 deductible to a 50% deductible for a $2 deductible[39]. These changes should encourage additional participation in the program but it is too early to assess the impact.

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37 Witt, C. "Dairy Options Pilot Program and Dairy Livestock Gross Management Program." April 2010. RMA presentation to DIAC.

38USDA - RMA. "Improvements to the Livestock Gross Margin for Dairy Cattle Insurance Plan." October 26, 2010. RMA Program Announcement.

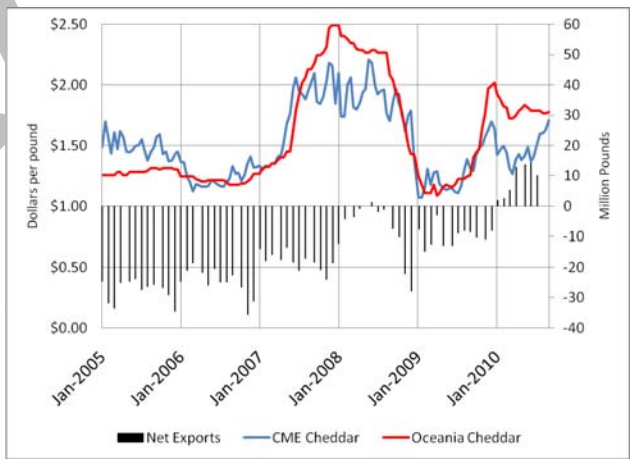
39 RMA Fact Sheet "Livestock Gross Margin Insurance - - Dairy Cattle" November 2010

Discussion

Although the DPPSP program has been a longstanding and, at times, effective cornerstone of U.S. dairy policy, the committee agrees with much of the criticism that has been leveled against it in the context of today's marketplace and recommends its termination and replacement with an alternate safety net program.

The price support program is largely irrelevant as a dairy farm safety net in today's context because it is set at a level that is far below farm milk production costs. The price enhancement aspect of the price support program was largely reduced in the 1980s due to high budget costs associated with the development of burdensome surpluses.

The international environment within which the U.S. dairy industry operates and the implications for the maintenance of the price support system have also changed over the last two decades. Historically, strict import barriers in the form of quotas provided sufficient protection of the domestic market that the price support program could be used to enhance producer income with little risk to the markets for U.S. dairy products. The replacement of the more rigid import quota system with tariff-rate quotas through the implementation of the Uruguay round of the WTO in 1995 and the convergence of U.S. and international prices have resulted in much greater commercial dairy trade between the U.S. and other countries. This trade has implications for effective use of the support program. With this higher level of trade, efforts to enhance producer income through raising the DPPSP prices above international levels have the potential to reduce exports, keeping product within the U.S. where the inventories weigh the market down over a more extended period. Our worldwide competitors benefit as the U.S. supply gets diverted from the international market to U.S. government coffers. This reduced supply on the international market results in higher international price equilibrium than would exist if U.S. supplies were not diverted to government coffers and effectively shields our international competitors from making further supply adjustments.

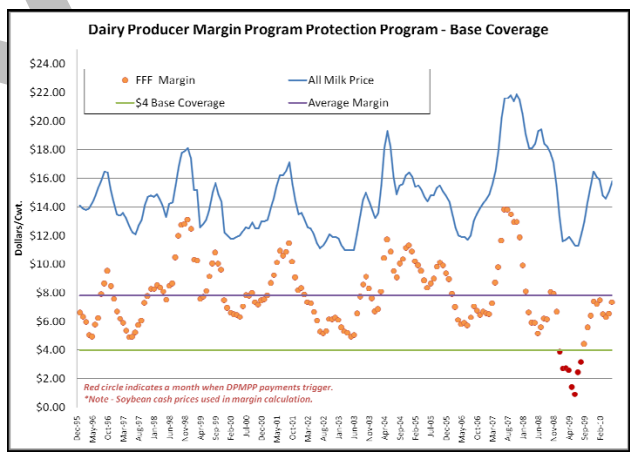


Margins (the relationship between income and expense) are a more critical factor in farm profitability and viability than are absolute price levels. As a consequence, replacing the dairy product price support program and the milk income loss contract (MILC) program with a margin insurance program is recommended. On the surface, a margin insurance program more directly addresses farm viability policy objectives in a size-neutral way than do the existing programs.

National Milk Producers Federation is proposing the elimination of the DPPSP and the MILC programs with the Dairy Producer Margin Protection Program (DPMPP).[40] The DPMPP would be a federal program that supports margins and would require producers to participate for the life of the next farm bill. In order to fund the program, the MILC and DPPSP would be eliminated, and those program funds would be allocated to fund the base and supplementary coverage levels.

The program has two tiers of protection – the first would be a base margin guarantee and the second would be supplemental margin insurance coverage. According to NMPF's proposal, the base margin guarantee would be half of the CBO projected margin. The current proposal estimates approximately $4 for margin coverage. Producers could receive payments on 90 percent of their historical milk base. Bases would be determined by taking the highest milk production from the previous three years or recent months' production extrapolated to twelve months for new producers.

The supplemental "buy-up" insurance tier would include a federal subsidy for buying additional margin coverage protection. The subsidies available would be based upon a sliding scale. As higher coverage levels are elected, producers will get less Federal subsidy. An important note is that producers would be required to hold the same level of supplementary coverage throughout the entire program. NMPF envisions that this program would be free from payment limits because they classify it as insurance.



40 NMPF. "Foundation for the Future – A New Direction for Dairy Policy." June 2010.

Generally speaking, there are no payment limits on crop insurance because producers pay a premium into the program.

American Farm Bureau Federation reviewed the DPMPP.[41] Its analysis suggests that the program can fit within the allotted baseline for dairy programs should CBO choose to score the margin in a way that reflects the relationship between milk prices and feed costs.

According to the analysis by the AFBF, base coverage level works like a counter-cyclical margin protection payment. They observed that the base program would not pay out very often. Looking back 15 years, base payments would have been triggered in eight of twelve months in 2009. There were some difficult price/margin periods during that time period (1997, 2002-03, and 2006) that would have not received any base payment. It is likely that supplemental coverage would have triggered for most farms.

The supplemental program appears to structurally fit the criteria of being insurance. NMPF has designed the program to put a great deal of emphasis and funding in the base program. Subsidies for the supplemental, voluntary insurance portion would be funded through remaining dollars, essentially CBO's dairy baseline less the cost of the base program.

FAPRI's analysis acknowledges that the margin insurance component of the program will provide better protection to producers in times of extreme industry stress when both coverage tiers are utilized. The current MILC program would make payments to producers sooner, but as margins decline DPMPP would make larger payments.

41 AFBF Economic Analysis Department. "AFBF Analysis of National Milk Producers Federation Foundation for the Future Proposal." September 2010.

Farm Savings Accounts

> *Recommendation 14:*
>
> *ADOPT TAX-DEFERRED FARM SAVINGS ACCOUNTS. The tax law should be amended to allow dairy farm operators to create special tax-deferred savings accounts. These accounts should not be subject to matching government contributions and should not have a limit on dollars deferred per year. To be eligible, contributions must remain in the account for a minimum of six months; the account-holder can withdraw their funds at their own discretion thereafter. Payment of taxes on contributions and interest would occur in the tax year in which the funds are withdrawn.*

Background Information

Dairy farm margin volatility is of significant concern for several reasons. The margin volatility challenges the viability of dairy farm operations in the low margin cycles. The sector stress and associated impacts on the rural infrastructure often stimulate calls for short-term government policy interventions which may, in some cases, disrupt markets and have detrimental impacts on long-term dairy farm margins.

Tax-deferred farm savings accounts are one of several tools that should be in the dairy farm toolbox to assist in the management of margin volatility. Farm savings accounts provide a platform through which farmers can defer taxable income in profitable years by placing funds in a qualified account. These funds are then available to offset reduced cash flow in low margin years. In addition to assisting producers through periods of financial stress, farm savings account may reduce the level of investment in expansion and other capital projects that are made with the objective of avoiding tax liabilities under current tax law. This reduction in tax-avoidance driven investment in profitable years may reduce the production surge that typically contributes to a deeper down cycle after profitable years.

Discussion

The concepts behind tax-deferred farm savings accounts are not altogether new. Variations that included matching funds from the Federal government were explored as potential policy options in the 2002 and 2008 Farm Bill debates as an alternative to traditional crop programs but were ultimately rejected by Congress. The primary difference between the proposals considered previously and the

recommendation of this committee is that the earlier proposals included government matching funds and were proposed as replacement for traditional commodity programs. In contrast, the DIAC believes that tax-deferred savings accounts have merit as a margin management tool by themselves and do not recommend a government match that might require displacement of other programs.

Tax-deferred farm savings accounts have not been studied using precisely the same parameters as recommended by the DIAC. However, variations on them have been discussed in academic literature. The following two programs have been presented as alternatives to the current suite of safety net programs for other commodities and have been the subject of academic research[42]:

a) Farm and Ranch Risk Management Accounts (FARRM) -- would provide a tax deferral incentives, require positive net farm income to qualify, and limit deposits to 20 percent of net farm income; and

b) Counter-Cyclical Accounts (CCAs) -- provide direct government support through a government savings match, require average gross farm income greater than $50,000 or be limited resource farm, and allow a maximum deposit of 2 percent of gross income with a $5,000 match.

Both accounts also have set conditions under which the funds can be drawn. Money in CCAs can only be removed when annual income falls below 90 percent of its 5-year average. Money from FARRM accounts can be withdrawn at any time but must be withdrawn within five years.

Enahoro and Gloy[43] (2006) analyzed data from 142 New York dairy farms to determine the effectiveness of FARRM and CCA accounts. The model analysis estimated average investments at the end of the five years in FARRM accounts at $9,726 to $42,289, depending upon the income measure used to determine deposit capabilities, compared with $5,861 to $17,582 in the CCAs. Despite the government match in the CCAs, larger balances were accumulated in the FARRM accounts due to more frequent

42 Gloy, B. and A. Novakovic. "Farm Savings Accounts as a Tool for Dairy Farm Risk Management." April 2010. Presentation to USDA DIAC.

43 Enahoro, D. and B. Gloy. "Examining the Potential Benefits of Federally Subsidized Farm Savings Accounts for Dairy Farmers. July 2006. Selected Paper for 2006 American Agricultural Economics Association (AAEA) Annual Meeting, Long Beach, CA.

removals from CCA accounts related to income indexing. Tax deferrals and increased withdrawals could also impact these balances.

A 2006 ERS study[44] examined farm savings accounts, including FARRM and CCAs, and revenue insurance as options to provide a "whole farm" safety net to U.S. agricultural producers. The study found that the tax deferrals come at a much smaller government cost, and this is likely due to the fact that a very low percent of farmers report taxable income each year, either due to lack of profitability or through the use of tax avoidance strategies. For example, 70 percent of farm sole proprietorships reported losses for tax purposes in 2004, while about half of all farm partnerships and small business corporations report losses.[45]

The study concluded that farm savings accounts encourage farmers to manage risk, but the level of risk protection would ultimately depend on the reserves in the accounts. Those reserves would depend upon farmers' participation, their levels of income, and their cash flow capacities. Outcomes could include concentration of benefits or lack of adequate balances depending on the program's design.

Dismukes and Durst also examined savings account programs in other countries. Australia instituted a savings account scheme that allowed producers to deduct the deposited amount from their taxes and defer those taxes until the year in which the savings are withdrawn. Australian experience shows that only 10 percent of dairies and 15 percent of all farms utilized these accounts.

In Canada, the experience with farm savings accounts resulted in some farmers carrying large balances, while others – generally small farms – carried little or no balances. The Canadian Net Income Stabilization Account (NISA) program provided significant incentives to encourage deposits, including a government match and a 3 percentage point interest rate bonus on account balances. The bonus interest rate proved to be too lucrative and became an obstacle to farmers withdrawing funds in low income years. NISA was replaced with the Canadian Agricultural Income Stabilization (CAIS) program that combines

44 Dismukes, R. and Durst, R. "Whole-Farm Approaches to a Safety Net." 2006. USDA-ERS Economic Information Bulletin 15.

45 Durst, Ron. "Federal Tax Policies and Farm Households." May 2009. USDA-ERS Economic Information Bulletin 54.

the farm savings accounts and disaster assistance. Under this system, the participant does not receive a contribution until he or she experiences a drop in net farm income but still receives the interest rate bonus. That makes the program work somewhat like income insurance, although, producers do not pay a risk-based fee.

Stephenson and Nicholson (2010)[46] examined the impacts of farm savings accounts on price volatility. Their analysis was based upon farm savings accounts with a 1:1 government match on contributions up to $10,000. They assume a second tier of support with a government match of $1 for every $4 contributed by a producer on the increment between $10,000 and $40,000. They also assume that farms earning more than $750,000 per year in net farm operating income (NFOI) would not qualify for the government match.

The study finds that savings accounts do have a positive impact on reducing price variability and the overall absolute deviation indicator of variation. For scenarios with shocks, the reduction is comparable to various supply management programs. Therefore, even if participation appears to be concentrated in larger farms, all producers ultimately would benefit from the program.

Conclusion

The Committee recommends amending the tax laws to provide for farms savings accounts. The Committee further recommends that farm savings accounts contain the following provisions:

1) No government match.
2) No limits on the dollars deferred per year.
3) Require money to remain in account a minimum of six months and allow withdrawal at account-holder's discretion thereafter.
4) Tax deposits and interest upon withdrawal from the account.

46 Nicholson, C. and M. Stephenson. "Initial Analysis of the Impacts of a Farm Savings Account Program on Price Volatility." September 2010. DIAC Paper.

The rules proposed above would provide a tool that benefits dairy producers through the development of a tax deferral mechanism that could result in reserve capital to address margin down turns. No government matching funds should address budgetary concerns. Because dairy farmers largely manage their tax liability down through forward purchases or expansion, this proposal should have minimal impact on tax collections.

Programs to Improve Profitability and Dairy Markets

Export Markets

> *Recommendation 15:*
>
> *MAINTAIN AND EXPAND PROGRAMS FOR EXPORT MARKET DEVELOPMENT. Programs like the Market Access Program and the Foreign Market Development Program should be continued and expanded.*

Background Information

Several USDA programs, including the Market Access Program (MAP) and the Foreign Market Development Program (FMDP) administered by the Foreign Agricultural Service fund activities that introduce U.S.-produced dairy products to key export markets and are important components of the budgets of organizations like the U.S. Dairy Export Council.

The export market has been especially important to the U.S. dairy industry price recovery in 2010. During the first nine months of 2010, U.S. exports were equivalent to 43 percent of the Nonfat Dry Milk/Skim Milk Powder (NDM/SMP), 65 percent of the whey proteins, 65 percent of the lactose, 4 percent of the cheese and 8 percent of the butter produced in the U.S.

Discussion

A review of the price relationship between the domestic and international markets and import / export data substantiates the interplay between U.S. and international dairy prices. Prior to the implementation of the WTO reforms in the mid-1990s, U.S. exports were minimal. As the reform implementation resulted in reduced export subsidies from the E.U. and increased animal protein demand in developing countries, convergence of U.S. and international prices over the last decade has resulted in increasing U.S. exports and reduced imports. In fact, international prices have exceeded U.S. prices for meaningful periods since 2005. In turn, exports have increased and imports have decreased during these

period. With the WTO leveling the playing field with other countries that subsidize their farms much more than the U.S. we also need to assess the effect of future negotiations on the US margins. The impact of WTO tariff commitments and the funds required to pay damages if the U.S. were to increase its tariff barriers beyond agreed levels makes isolation of the domestic market unlikely. Additionally, a protectionist approach that isolates the U.S. markets and significantly raises prices would isolate the greatest growth opportunities for the U.S. dairy industry.

Global demand for dairy products is increasing driven by income growth and changing diets in developing countries. That has opened up new opportunities for dairy product exports and also increased the correlation between farm-gate prices in different countries. We live in a market economy and ninety-six percent of the world's population, live, purchase and consume products outside of the United States.

During the DIAC committee discussions it was stressed that the dairy industry has become increasingly globalized and complex, higher volatility in output and input prices, and new sources of demand growth (exports, functional nutrients, pharmaceutical products). There was caution expressed about using the existing models for predicting world demand which may over simplify the situation and make predicting demand and supply challenging. Growing world demand, slow growth in global milk production, falling government inventories and fewer export subsidies pushed prices on the world market to record highs in 2007 and 2008. The economic crisis combined with a rebound in global milk production in late 2008 pushed prices down in late 2008 and early 2009. Prior to 2007 there was nearly always a surplus of dairy products in the US or the EU, which generally offered a buffer against higher prices. Since 2007, prices have become more volatile, not just in the US, but also worldwide.

The potential for an expanding market for international trade is based on the projection that the number of middle-class consumers in emerging markets is projected to triple by 2030, reaching one billion in that year. These consumers will demand more animal proteins for their diets, including dairy products. For example: China has 20 percent of the world’s population and growing per capita income and its dairy product consumption is expected to increase by about 10 percent annually in the coming years. Dairy product consumption is also expected to grow by 4 to 9 percent annually in Southeast Asia, depending upon the country, and Mexico, Algeria, and Saudi Arabia have recorded increases in dairy product consumption and are open to dairy imports. Mexico, in particular, will continue to represent a growing market for U.S. dairy exports. The opportunity for sales to these countries exist now as they start

to invest in their own dairy infrastructure and the US dairy industry needs to be proactive in competing for these markets with products. Available funds need to be used now to stimulate and support the manufacturing of products the world will buy. The world market can become a dependable growth sector for U.S. dairy whether supply is in surplus or deficit. The U.S. can be a player on the world market if they react to world trends rather than expecting the world market to be tailored to U.S. current manufacturing capacity.

Expanding existing market access and opening new markets under future trade agreements will significantly boost U.S. agricultural export sales. However, the industry's current role as largely a residual supplier of bulk commodities is leading to increased volatility in the U.S. market. The U.S. needs to be proactive in marketing more profitable value-added product as well as bulk commodities on the world market.

Recently, the National Commission on Fiscal Responsibility and Reform released its findings[47] on areas reconciling the budget deficit through policy and fiscal reform. Spending suggestions covered a range of Federal Agencies and programs. Changes to agricultural programs included spending reductions for MAP. This recommendation is in direct conflict with the Administration's goal of doubling exports 2015. Programs like MAP implement the Administration's goal by facilitating export enhancement. MAP is a sound investment in U.S. agriculture's global competitiveness and results in increased U.S. exports. Considering new export goals and the benefit to the U.S. dairy industry, MAP funding should be maintained.

Conclusion

Ample evidence has been presented to the committee that the U.S. is uniquely positioned to take advantage of these opportunities. The transition to becoming a consistent supplier of value-added dairy products should provide more consistent and resilient export volumes, thereby reducing the incremental price volatility currently contributed by our volatile export volumes. The Committee recommends that

47 The National Commission on Fiscal Responsibility. "The Moment of Truth." December 2010. White House Release.

USDA maintain and even expand its trade export development capacity to take advantage of new export opportunities for dairy products and increase exports of value-added dairy products.

Farm Milk Quality

> *Recommendation 16:*
>
> *LOWER SOMATIC CELL COUNT LIMIT FOR GRADE A MILK. We recommend that the Secretary of Agriculture support the adoption of a maximum somatic cell count of Grade A milk in the amount of 400,000 cells per milliliter at the farm level at the Interstate Milk Shippers Conference. The implementation should occur over a period of time not to exceed 48 months.*

Background Information

The Food and Drug Administration through the Pasteurized Milk Ordinance (PMO) oversee the U.S. somatic cell count (SCC) standard. The National Conference on Interstate Milk Shipments (NCIMS) is held every 2-years where members debate proposed changes to the PMO. The NCIMS will meet in April 2011 where it is anticipated a proposal will be offered to lower the SCC standard to 400,000 cells per ml. The current SCC standard is set at 750,000 cells per ml.

Discussion

The European Union (EU) has declared that all farm milk used in U.S. exports to their member countries be held to the same SCC standard as domestic EU dairy producers. The EU standard is currently 400,000 cells per ml at the farm level.

The committee believes that lowering the U.S. SCC standard would increase access to European markets, encourage producers to remove inferior animals, and increase the quality of U.S. milk. This may enable the U.S. to be more competitive in other markets as well. However, the move to a stricter SCC standard should be done carefully so as to not inhibit U.S. competiveness in the market or place greater strain on dairy producers and those agencies that support them.

The National Milk Producers Federation (NMPF) passed a resolution at their October annual meeting to propose lowering the SCC standard to 600,000 cells per ml effective Jan. 1, 2012; 500,000 cells per ml by Jan. 1, 2013; and 400,000 cells per ml by Jan. 1, 2014. It should be noted that the resolution gives some discretion for seasonally dependent events.[48] This resolution is expected to be presented at the NCIMS in April 2011. If passed, the IMS will recommend to FDA to lower the SCC standard contained in the PMO.

The committee cautions that the regulatory change for Grade 'A' milk should be carefully implemented by the FDA because the EU SCC standard is quite different than the current U.S. SCC standard. If U.S. standards are changed to mirror the EU standards, the U.S. should use similar testing mechanisms so unnecessary burdens are not placed on U.S. producers or regulatory agencies. The shift of focus to farm level SCC counts is a dramatic change from using the commingled silo or tanker for testing for regulatory purposes. Also, the current U.S. method of SCC sampling for purposes of regulation is a one–point-in-time versus the EU's three-month rolling geometric mean. It should also be noted that the EU makes exceptions to this standard for products such as raw aged cheese and for certain countries such as Romania, which is exempt.

Additionally, possible trade benefits would need to be balanced with increased costs on State food safety agencies, which are currently understaffed and underfunded. The U.S. dairy industry should be able to adapt if the regulations are implemented carefully. Dairy producers have already demonstrated their ability to adapt in response to stricter SCC standards when the regulated SCC standard was reduced from 1,500,000 cells per ml to 1,000,000 cells per ml in the 1970s and from 1,000,000 cells per ml to 750,000 cells per ml around 1990.

Conclusion

The DIAC considers a stricter SCC standard an important step in opening new markets for U.S. exports, as well as a means for providing higher quality milk products to consumers. While the committee acknowledges that the SCC standard is set by the FDA, it recommends that the Secretary of

48 http://nmpf.org/latest-news/news-dairy-coops/articles/eu-somatic-cell-count-standard-still-unresolved

Agriculture support lowering the standard to 400,000 cells per ml at the upcoming NCIMS where it will likely be proposed and debated.

Dairy Product Quality – California Fluid Milk Standards

Recommendation 17:

ADOPT CALIFORNIA MILK SOLIDS STANDARDS FOR FLUID MILK.

Background

Milk as it comes from the cow contains water, nonfat solids and butterfat. The nonfat milk solids are composed of proteins, lactose and minerals. The percentage content of each varies by breed of cow, season, diet and region. Nationally, the average annual composition of milk is 8.72 percent nonfat solids and 3.67 percent butterfat, with the remainder being water. Food and Drug Administration (FDA) regulations allow fluid processors to affect the composition of milk by adding or removing butterfat or by blending milk of varying compositions to achieve a particular fluid product. Minimum standards for fluid milk are established by the FDA. States can also establish standards for fluid milk marketed within the state.

The minimum standard for non-fat solids for the majority of the country is 8.25% for fluid milk at the retail level. Since 1962 fluid milk marketed in California has to meet different standards. The current standard is 8.7% for whole milk, 10% for reduced fat (2% fat) milk, 11% for low fat (1% fat) milk and 9% nonfat solids in skim milk. There are several fluid milk products on the market in other states with similar solids levels. The difference is that those products are usually sold at a significant premium while consumers in California appear to be paying competitive retail prices for milk with more calcium and protein. [49]

The Food and Agricultural Policy Research Institute (FAPRI) [50] completed a study in August 2010 on the effects of adopting these higher standards. The study said the effects of adopting California fluid

49 From the National Farm Bureau policy which supports implementation of the California standards for solids non fat in fluid milk at the national level. October 2010

50 FAPRI report *The effect of Adopting Californian Milk Standards in the United States* - August 2010

standards across the U.S. is an increase in nonfat solids used in fluid products of about 350 million pounds per year. FAPRI further states that the increase in milk price of 27 cents/hundredweight would occur in the first year and is reduced in subsequent years as milk production grows due to producer response to higher milk prices. In addition, FAPRI believes that the cost at the retail level will increase by 17¢ per gallon which might affect consumer purchase if all of the cost is passed on to the fluid milk customer.

Table 1: Calcium Content Comparison of California vs. Federal Fluid Milk Standards*

	CA Standard* (8.7-11% NFDM)	Federal Standard* (8.25% NFDM)
Whole Milk	276	261
2% Reduced Fat	317	261
1% Low Fat	348	261
Non Fat	285	261

Table 2: Protein Content of Milk under California vs. Fluid Milk Standards*

	CA Standard (8.7-11% NFDM)	Federal Standard* (8.25% NFDM)
Whole Milk	7.9	7.5
2% Reduced Fat	9.1	7.5
1% Low Fat	10.0	7.5
Non Fat	8.2	7.5

All values are in grams of protein, for 8 oz. milk. Values are based on nutrient content of NFDM and extrapolated to appropriate level of fortification. NFDM values from Handbook 8-1, 1976. Minimum nonfat solids content standards for California are as follows: whole milk=8.7%, 2% milk=10%, 1% milk=11%, nonfat milk=9%.NFDM = non-fat dry milk solids.

*These are the minimum California and federal minimum standards. [51]

Discussion

There have been numerous studies of the effects of imposing California fluid milk standards across the US[52]. At the request of the US Congressional Dairy Farm Caucus, the University of Missouri's Food and Agricultural Policy Research Institute wrote a report to consider the potential effects of mandating California fluid milk standards on a national level (FAPRI study).

The study indicated that fortifying the nation's milk to California standards would remove an additional 350 million pounds of nonfat solids per year. That would drive nonfat dry milk prices higher and increase farm milk prices by 27 cents per hundredweight during the first year. Those price increases would then slip to 17 cents in the second year and narrow to 9 cents by the seventh year, the study said, as farmers increase milk production in response to the higher prices. The study estimated that the retail price of a gallon of milk would rise about 17 cents, if processors pass on to consumers the additional cost of fortification. According to the study, if all the cost of the jump in retail price was passed on to the consumer, it would lead to a slight drop in milk consumption. The FAPRI study also showed that price benefits to dairy farmers were regional, with farmers in heavy Non Fat Dried Milk (NFDM) producing states, such as California, benefitting while dairymen in large cheese-producing states, such as Wisconsin and Minnesota, actually seeing milk price decreases over time. Increased milk production and potentially reduced consumption would also drive cheese and butter prices lower, according to the analysis.

Although the FAPRI study mirrors previous studies, it noted "the market situation is very different today than when those studies were conducted." One key difference is that the U.S. dairy sector has now become a major exporter of skim milk solids. Past studies were done when there were large government stocks of nonfat dry milk, and adding more solids to milk was thought to be a way to reduce that surplus. Today, the effect of fortification would reduce exports, the study said, as fewer nonfat solids become available.

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51 Nutrient Contribution of Fortified Fluid Milk – Dairy Council of California

52 Salathe and Price, Outlaw et. al., Boynton

In opposing arguments, Rick Michel, vice chairman of the California Milk Advisory Board, said he believes any impact on the availability of product for export would be short-lived, as farmers' ramp up production to meet demand. "Milk producers, if profitable, have the ability to make milk and if given the green light, we will make more milk—and we can make a lot of it," he said. "So I don't see anything interfering with exports."53

Those dairy farmers and organizations that support higher, mandatory fluid milk standards see it as a win-win for both producers and milk drinkers, pointing to the increased nutritional benefits and increased taste.[54] They suggest that by putting "more milk in the milk" consumers would not only benefit from the added nutrients but they would also notice a better-tasting product, which would expand the market. Taste tests have been inconclusive with mixed results depending on location and demographic of consumer. Retailers fear that consumers who have a current preference for non-fat milk would drink less milk if they only had one choice and there would be confusion resulting in lower sales. Proponents of the plan say the fortification fits well with the Obama's administration's push to improve the nation's health and reduce childhood obesity.

Conclusion

DIAC's recommendation to adopt the Californian milk standards nationally recognizes the many differences of opinion and the lack of conclusive evidence in the FAPRI report. The true impact of any policy change depends on the exact implementation of the new policy. Analysis of imposing California fluid milk standards across the rest of the US is dependent on some key variables which include how costs of fluid milk fortification will be shared and how consumers will accept a higher solids fluid product. The issue of regional inequity, as well as uncertainty around the potential for encouraging imported solids, incomplete data on total cost of fortification used in the FAPRI analysis, the lack of excess NFDM in the U.S., and uncertainty around the amount of plant investment's impact on consumer cost must all be addressed as the new policy is enacted. The DIAC place this recommendation in the Secretary's tool box as part of a national solution with no doubt that, according to the FAPRI report, the

53 New Study Adds To Debate About Milk Standards - 10/14/2010 California Farm Bureau

54 http://www.dairycouncilofca.org/Milk-Dairy/CaliforniaMain.aspx

new standards would increase the farmer pay price and could have many benefits for consumption of fluid milk but acknowledges that there isn't enough information available to complete a comprehensive cost benefit analysis over the long term at this time.

Dairy Product Quality – Dairy Product Labeling

> *Recommendation 18:*
>
> *RESTRICT USE OF DAIRY DESCRIPTORS ON PRODUCT LABELS. We recommend that USDA support restriction of dairy descriptors, including terms such as milk, cheese, yogurt, butter, for use on products made from milk.*

Background

Product innovation has occurred throughout the food sector. Dairy products are no longer limited to strictly defined standards of identities and many new novel products have been introduced to the market. Dairy products have beneficial combinations of nutrients not found in other products. Advertising and food container labels should be accurate and truthful so consumers are properly informed of product contents and are not misled. Making informed food choices will improve nutrition, increase overall health, and help prevent disease.

Discussion

The Committee is concerned that misleading food product labels are having a detrimental impact on dairy product sales. Some products are currently being marketed that mimic traditional dairy products and are labeled using milk or dairy terms. One product that was specifically mentioned during committee discussion was "Muscle Milk," a product that contains no traditional milk yet is marketed side-by-side with conventional fluid milk. Other products made from soy, almond or other non-milk products have labels that infer they are made with or are equivalent to dairy products. The committee's concern extends to misspelling meant to suggest milk contents or equivalence, e.g. Kreme or Cheez. The Committee advocates that food labels and names should be accurately and truthfully. Our recommendation is not intended to stymie innovation or prevent dairy product manufacturers from using ingredients that are and have been customarily added to dairy products.

Conclusion

The Committee recommends that the Secretary of Agriculture support restrictions on dairy descriptors that will help preserve the integrity of milk's nutritious and wholesome image. Eliminating confusion over product identity and content will likely increase demand for milk and dairy products. Truthful and accurate food labels can also contribute to improving consumer health.

Dairy Management Practices and Production Costs – Value-Added Dairy Operations

Recommendation 19:

SUPPORT FOR VALUE-ADDED DAIRY. We recommend that the Secretary of Agriculture support programs that enhance value-added market development for dairy farms and dairy products. Opportunities should be explored including, but not limited to, the development of educational training programs and technical assistance for farms, inspectors, and regulatory personnel to accommodate unique value-added dairy farm operations. A study should be made to examine the impact of user fees on value-added dairy product operations.

Background

The number of farms in the United States has grown 4 percent and the operators of those farms have become more diverse in the past five years, according to results of the 2007 Census of Agriculture released by the U.S. Department of Agriculture's National Agricultural Statistics Service (NASS). The latest census figures show a continuation in the trend towards more small and very large farms and fewer mid-sized operations. Many of these farmers are either beginning farmers[55] and/or second career farmers. This is the fastest growing sector of farm operators, with a fifth of all farms having a principal operator that is a beginning farmer. In this sector, dairy averages about 17 percent of commodity production by beginning farmers, second only to poultry at 20 percent.[56]

55 USDA's definition of a farm encompasses a large number of different farming operations, and the beginning farmer definition is, likewise, broad. USDA's current definition of a beginning farm is one operated by a farmer who has operated a farm or ranch for 10 years or less.

56 Beginning Farmers and Ranchers: Mary Ahearn, Doris Newton – Economic Information Bulletin Number 53 May 2007. http://www.ers.usda.gov/Publications/EIB53/EIB53.pdf

Local and regional food systems are the fastest growing areas in agriculture.[57] The value-added marketing of dairy products by small to medium sized operations, to take advantage of this developing trend can either be achieved within a wholesale market (for example organic certification) or by direct marketing using on-farm processing or joint ventures for manufacturing and marketing of dairy products. All dairy manufacturing is regulated in some form by town, county, state and/or federal regulations which are continually evolving to meet new areas of risk for food safety. In some situations the regulatory burden on small operations might be financially and operational prohibitive and not representative of the operational risk assessment. The training of dairy inspectors and operators of small to mid-size dairy operations has not kept up with the rapid growth of operations, especially interpreting regulations on a scale-appropriate basis. The USDA's Food Safety and Inspection Service (FSIS) has recognized this challenge with their regulation and education for operators.[58] The recent passage of the FDA Food Safety Modernization Act will help tighten food safety oversight while also including provisions that recognize different operational practices, size of operations and the need for technical training.[59] These provisions mean small to mid-size operations follow and implement the same regulations as all establishments and any infringement of the regulations will be enforced to the same extent it is in all other business.

Discussion

The changing face of agriculture is attracting entrepreneurs who see the value in direct marketing dairy products, and they are bringing new expertise to the industry and new approaches to dairy farming that directly appeal to consumers. The loss of small to mid-size dairy operations is well documented and, while some leave the industry, other operations are transitioning from the wholesale selling of milk to direct marketing of fluid and manufactured dairy products. The high capital cost of manufacturing equipment, challenges to establishing a customer based and, in some circumstance, regulation can inhibit

57 Agriculture Secretary Vilsack Launches Showcase on 'Know Your Farmer, Know Your Food' Website Online Resource will Expand National Dialogue About Economic Opportunity for Producers -8/30/2010

58 http://www.fsis.usda.gov/Science/Small_Very_Small_Plant_Outreach/index.asp

59 Regulatory Flexibility - Modernizes our food safety system without being burdensome. Provides training for facilities to comply with the new safety requirements and includes special accommodations for small businesses and farms.

the growth of on farm value-added enterprises and provide high barriers to innovation and profitability for dairy farms that want to maximize their location or product by selling direct to the consumers. Adding disproportionate expenses to farms and food producers that already depend on slim margins will reduce opportunity and create barriers to entry for producers of all scales. Overextended regulations undermine private and voluntary systems of training and continuous improvement, and undermine any sense of "shared responsibility" among all food-system players, ultimately harming the public the regulations purport to protect. Establishment and enforcement of baseline standards, especially in areas of greatest known risk, is an important responsibility of government. Federal, state and local agencies need to work together in a consistent fashion to tailor enforcement that is appropriate and effective in light of local and regional realities, reinforcing a multi-stakeholder process of continuous improvement.

Conclusion

The DIAC considers that opportunities exist for dairy farms to increase their profitability and sustainability by the marketing of value-added dairy products. The committee also acknowledges that, for some dairies that are struggling to remain in business, the opportunity to maximize their location and involvement in the local community by marketing value-added dairy products may allow them to continue dairy farming with all the associated benefits to the preservation of the economic and social infrastructure of their rural community. The Committee recommends that the Secretary actively support value-added market development for dairy farms and dairy products and also explore the development of educational training programs and technical assistance for farms, inspectors, and regulatory personnel to accommodate unique value-added dairy farm operations. The Committee also recommends that the Secretary use experience gained in other areas of agriculture regulation to conduct a study to examine the impact of user fees on value-added dairy product operations.

Dairy Management Practices and Production Costs – Environmental Practices

Recommendation 20:

PROVIDE INCENTIVE PAYMENTS FOR ENVIRONMENTAL PRACTICES. The Secretary of Agriculture should increase the amount of money available for incentive payments to dairy farmers for environmental practices that address social, economic and environmental benefits to dairy farm communities.

Background

Many studies have been done on the impact of dairy farms on local economies with a wide range of results. One common theme in all of them is the multiplier effect of the dairy industry.[60] Dairy farming is a capital intensive industry with many direct, indirect and induced effects. Dairy farms and milk processors directly affect the economy by employing farmers, milkers, truck drivers and workers at processing plants, the dairy industry also indirectly affects local economies through the purchases of inputs and services required to keep the industry operating. By creating and maintaining employment the spending of salaries and wages by workers employed in the dairy industry helps support the economy.

Dairy farms are seen as a boon to the countryside for those states that generate large amounts of income from tourism. The identity of some states is tied to a bucolic existence of livestock peacefully and happily grazing the green pasture and farmers leaning on pitchforks as stewards of the land. While this picture is unrealistic it is part of the marketing that has been very successful in attracting tourists who spend money on taxes, goods and services. The disappearance of working farms and the subsequent dilapidation of the land and buildings will have a significant negative effect on tourist or add costs to the state for the maintenance of the land.

Discussion

The rapidly changing face of agriculture and an expanding urban population has resulted in new challenges for all dairies and new opportunities for communities to preserve working farms, local sources of food and open space. There are many tools available to support and maintain dairy farms, some targeting specific tax benefits to all within a state; others recognizing the economic impact of dairy farms on the local community, and many giving preference to dairy farms maintaining environmentally stable open space.

Property taxes typically rise when rural land gives way to residential development, since new housing generally requires more in municipal services than it generates in property tax revenues. Local governments looking to retain farms and farmland can make good use of tax tools to create a supportive

60 The Community Value of a Dairy Farm: September 8, 2009 N. Alan Bair, Director of Dairy Industry Relations, The Pennsylvania State University

business environment for local farms in recognition of the many public benefits to the economy, land prices and quality of life that agriculture provides. This would include taxing agricultural land at a lower rate to recognize the lower cost burden on the community. Some other tools include tax credits,[61] over-order state premiums on state consumption of fluid milk, 62 and changes to the Federal estate taxes which could well be a factor if the farm stays in business or is sold for development. A high exemption from paying estate taxes of $5 million or even exempt production agriculture farms from paying any estate taxes if they stay in production would benefit production agriculture, especially those operations with a large land base.

Multiple studies have been done analyzing the effect on the local economy in retaining production dairy farms that support the farm owners and managers plus employ labor locally. Data on the dollar impact varies, for example a 2002 University of Wisconsin study showed each cow generates $13,737 of economic activity whereas a 1993 Minnesota study estimated the impact of one cow to be $11,671. On an employment basis, studies have found that for every 8 cows one full time job is created throughout the economy, with high and low calculations ranging from 4 to 20 cows per job. 63 On average, the local dairy industry has a job multiplier effect of 1.2 per cent64. Job creation will vary with the size of herds, type of production and location of dairy as shown in Table 1.

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61 The Massachusetts Department Of Agricultural Resources established a Dairy Farmer Tax Credit Program under which a dairy farmer who holds a Certificate of Registration may be allowed a refundable income tax credit based on the amount of milk produced and sold. The credit may be claimed against the taxes due pursuant to chapters 62 or 63 of the Massachusetts General Laws. The credit shall be based on the United States Federal Milk Marketing Order for the applicable market such that if the United States Federal Milk Marketing Order price drops below a Trigger Price anytime during the taxable year such taxpayer may receive the tax credit. http://www.mass.gov/agr/dairy/dairy_tax_credit.htm

62PA Milk Marketing Law established in 1968 and ME Dairy Support Program adopted effective July 1, 2007 Maine Dairy Stabilization Program, creates a safety net for state dairy farms in order to sustain them at a break-even level during times of low milk prices. http://www.maine.gov/agriculture/mmc/

63 *Source:* Rethinking Dairyland: Background for Decisions About Wisconsin's Dairy Industry. Marketing and Policy Briefing Paper No. 78A, May 2002, University of Wisconsin.

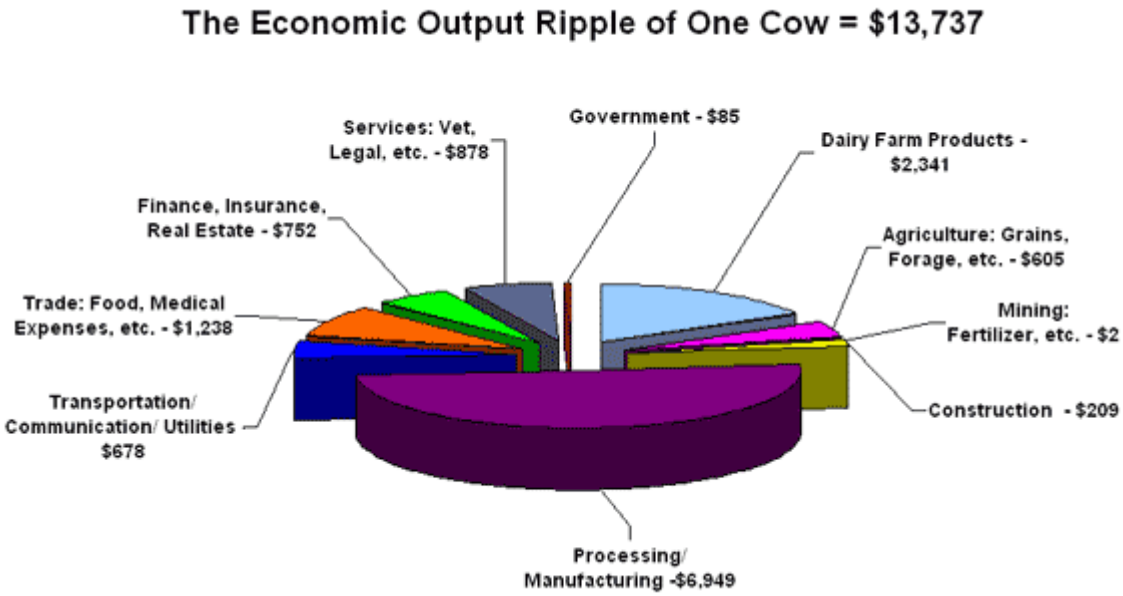
64 http://www.ansci.cornell.edu/prodairy/pdf/annualreport08.pdf

Table 1: Potential Economic Impact of a Modern Dairy in Minnesota

Source Joe Conlin, Quality Dairy Management Services, 2002

Number of cows	100	250	500	1000	2000
Milk (million lb/yr)	2.2	5.5	11	22	44
*Industrial output	$1,373.71	$3,434,280	$6,868,560	$13,737.12	$27,474.24
Federal taxes	$78,159	$195,397	$390,793	$781,587	$1,563,173
State & local taxes	$51,192	$127,979	$255,958	$511,916	$1,023,832
Jobs	11.5	28.6	57.3	114.5	229

*Industrial output = total economic activity generated for the farm, the rural communities, and the state where the farm resides.



The distribution of dairies across the country can be seen as desirable apart from their impact on the local economies. Dairy farming contributes greatly in Vermont, not only to the culture, history and landscape, but to its economy as well. In 2002, the American Farmland Trust conducted a study on the

profile of Addison and Franklin Counties, Vermont. 65 The study found that farmers typically spend more locally than other businesses, since they rely on a variety of local businesses: feed and seed dealers, fertilizer and fuel companies, machinery dealerships and repair shops. The study showed that Addison and Franklin county farms added $450 million annually to the local economy; were responsible for more than one-tenth of all the farm sales in New England; supported local businesses by spending $169.6 million on farm expenses; and provided more than 10 percent of all the jobs in the region.

In order to have operating dairy farms we need qualified and committed farm labor which has become an increasing problem, especially as production methods are becoming more sophisticated, so much so that interest in robotic milking has increased, especially among herds from 50-200 cows. The ability of dairy farm operators to compete on the labor market and provide a compensation package that will reflect the level of responsibility and work is directly related to their profitability. USDA ERS data show that in 2000 the cost per cwt for hired labor was $1.14, and that has increased to $1.71 in 2009. Health insurance in an occupation that is physically demanding and prone to accident is essential and many farm operators find it difficult to find affordable and adequate health care (health care without a $20,000 deductible).[66] Traditionally, a source of labor for dairy farm work has come from immigrants, whether under government plans or those immigrants that are able to work legally in the US.[67] Increased enforcement of regulations and uncertainty about immigration reform has been an issue with many dairies that had previously used qualified and motivated immigrant labor.[68]

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65 "The Economic Importance of Agriculture; A Profile of Addison and Franklin Counties, Vermont" American Farmland Trust .

66 There are a rising number of farm families that are on Badgercare in 2010, which is Wisconsin state health care program. – WI Secretary of Agriculture, Trade and Consumer Protection

67 Farm Labor Shortages and Immigration Policy - Linda Levine, Specialist in Labor Economics, Congressional Research Office, November 9, 2009

68 "Vermont dairy farms count on illegal immigrants" By Wilson Ring, AP Staff Writer, May 13, 2009, http://www.immigrationworksusa.org/uploaded/file/051309Vermontdairyfarmscountonillegalimmigrants.pdf

Dairy farms are capital and land intensive and the rising price of land has become a barrier to new entrants and the expansion of dairies. To address this land base issue, many states work with the USDA Natural Resource Conservation Program (NRCS) Farm and Ranch Lands Protection Program (FRPP) which provides matching funds to help purchase development rights to keep productive farm and ranchland in agricultural use. Working through existing programs, USDA partners with State, tribal, or local governments and non-governmental organizations to acquire conservation easements or other interests in land from landowners. USDA provides up to 50 percent of the fair market easement value of the conservation easement. An example of this collaboration, Massachusetts' Agricultural Preservation Restriction Program (APR) began as an act of the Legislature in 1979. This was the first in program in the nation and has since been a model upon which many other states have built their programs. As of 2008, the Massachusetts APR program has permanently protected over 725 farms and a total land area of over 61,855 acres.

Conclusion

The DIAC recommends that the Secretary recognizes the impact of dairy farmers as stewards of environmentally stable open space; job creators; economic drivers of rural economies; stabilizers of town and county tax bases; and providers of well rounded citizens. The Secretary should increase the amount of Federal funds available to dairy farms in recognition of these benefits especially those funds not traditionally targeted for dairy operations that can directly assist dairy farms deal with environmental challenges. While the economics of the dairy industry in the next ten years may make consolidation of milk production preferable, the Secretary has reminded this committee that the USDA must be aware of the needs of all farmers, not just those in large scale production agriculture. DIAC recommends that the Secretary give preference to dairy farms in different policy and program areas that address environmental challenges which directly affect farm profitability and also address the social and economic effects of dairy farm on the rural community, while providing a nationwide supply of milk.

Dairy Management Practices and Production Costs – EQIP

> *Recommendation 21:*
>
> *CONTINUE THE EQIP AND GRANT PROGRAMS. The EQIP program should be continued, and dairy farmers should be given preference in grant programs for implementation of energy audits, infrastructure development for value-added processing and distribution facilities, construction of facilities to meet food safety regulations and farmland protection, and to allow beginning farmer loans for farm transfers between generations.*

Background

With increasing state, county and federal conservation regulation and enforcement, the costs of meeting these regulations and the time dealing with regulators who lack experience with farm operations will increase. The Environmental Quality Incentives Program (EQIP) is one program that can assist the individual dairy farmer in meeting increasing regulation with an ever expanding urban population. EQIP was approved in 1996 by amending the Food Security Act of 1985 (Farm Bill), reauthorized in the Farm Security and Rural Investment Act of 2002 and again reauthorized in the Food, Conservation and Energy Act of 2008 (FCEA or "Farm Bill"). EQIP offers financial and technical help to assist eligible producers install or implement conservation practices on eligible agricultural land. The five EQIP national priorities are very applicable to the environmental challenges that the dairy industry experiences.[69] EQIP offers

69 Reductions of nonpoint source pollution, such as nutrients, sediment, pesticides, or excess salinity in impaired watersheds consistent with Total Daily Maximum Loads (TMDLs), where available; the reduction of surface and groundwater contamination; and reduction of contamination from agricultural point sources, such as concentrated animal feeding operations (CAFOs);

Conservation of ground and surface water resources

Reduction of emissions, such as particulate matter, nitrogen oxides (NOX), volatile organic compounds, and ozone precursors and depleters that contribute to air quality impairment violations of National Ambient Air Quality Standards

Reduction in soil erosion and sedimentation from unacceptable levels on agricultural land and

Promotion of at-risk species habitat conservation.

contracts that provide financial assistance to help develop conservation plans and implement conservation practices. EQIP may provide payments up to 75 percent of the estimated incurred costs and loss of income of certain conservation practices and conservation activity plans.

Credit for dairy operations can also be provided within USDA's farm loan program which operates under the authority of the Consolidated Farm and Rural Development Act (7 U.S.C. 1936) and is administered by USDA's Farm Service Agency (FSA). FSA makes direct and guaranteed farm ownership and operating loans to family-size farmers and ranchers who cannot obtain commercial credit from a bank, Farm Credit System institution, or other lender. FSA loans can be used to purchase land, livestock, equipment, feed, seed, and supplies. Loans can also be used to construct buildings or make farm improvements. FSA employs farm loan officers who originate and service Direct Farm Ownership and Operating Loans. FSA works with banks and Farm Credit System institutions, providing guarantees on loans originated and serviced by those commercial lenders.

Beginning farmers[70] are the fastest growing sector of farm operators, with a fifth of all farms having a principal operator that is a beginning farmer. In this sector, dairy averages about 17% of commodity production by beginning farmers, second only to poultry at 20%.[71] Industry financial experts and anecdotal reports directly from dairy farmers report that over 50% of dairy farms are under lender supervision in 2010 either to manage existing debt or the use of operational lines of credit.[72] With a shrinking number of lenders understanding agriculture, the USDA-FSA Farm Loan Program (FLP) is an

70 USDA's definition of a farm encompasses a large number of different farming operations, and the beginning farmer definition is, likewise, broad. USDA's current definition of a beginning farm is one operated by a farmer who has operated a farm or ranch for 10 years or less.

71 Beginning Farmers and Ranchers: Mary Ahearn, Doris Newton – Economic Information Bulletin Number 53 May 2007. http://www.ers.usda.gov/Publications/EIB53/EIB53.pdf

72 Senate Banking Committee, 12/1/10: According to the FDIC, farmers are falling behind on their loans at a 17-year high. Approximately two percent of farm loans are in trouble. Often, the collateral for farm loans is the farm itself, so if a farmer defaults on an operating loan they are at risk of losing their business and their home. "Because of the economy and because some farm loans are in trouble, several banks are telling us that regulators are seeing farm loans as suspect, and discouraging community banks from carrying farm loans. This attitude is hurting rural America without making the banking system safer. What is the FDIC doing to work with banks to make sure farmers have access to credit?" Kohl asked.

important source of credit to dairy producers. FLP provides direct loans, guarantees on loans originated through commercial banks or Farm Credit System associations, and interest assistance on operating lines of credit, as well as emergency loans in situations where farmers have been adversely impacted by severe weather conditions. FLP targets a significant portion of its funds to beginning farmers: 50% of Direct Operating, 40% of Guaranteed Operating, 75% of Direct Farm Ownership, and 40% of Guaranteed Farm Ownership. Approximately 52% of the loans in the FLP portfolio were Direct Operating Loans typically used for purchase of cattle, machinery, building construction, or other farm improvements. An additional 20% were Guaranteed Operating Loans originated and serviced by commercial lenders. Direct Farm Ownership Loans and Guaranteed Farm Ownership Loans used for purchase of farm real estate each accounted for 12% of the loans in the portfolio.

The USDA Rural Development Agency's Rural Energy for America Program Grants/Energy Audit and Renewable Energy Development Assist (REAP/EA/REDA) is grant money for energy audits and renewable energy development to organizations that help agricultural producers and rural small businesses reduce energy costs and consumption.

As the number of dairy farms in any one area decrease there is a corresponding decrease in the economic viability and profitability for service providers. As these service providers disappear, there is an increased overhead for maintenance, repair and other input service costs, plus the availability of production advisors. In order to re-establish that infrastructure to meet the changing needs of farmers the USDA Rural Development Value-Added Producer Grants (VAPG) can be used for both capital and planning activities and for working capital to market value-added agricultural products and for farm-based renewable energy. Eligible applicants are independent producers, farmer and rancher cooperatives, agricultural producer groups, and majority-controlled producer-based business ventures.

Discussion

Although net income for dairy farmers improved in 2010, weakened balance sheets leave farmers vulnerable in the current uncertain economic environment. Recent dramatic increases in corn futures markets indicate that dairy farm expenses may once again stress farm margins in 2011. The Milk Income Loss Contract Program (MILC) payments are projected to start in January 2011 and run into 2012, which indicates that dairy farm profitability and liquidity will be stressed in the next two years.

DIAC recognizes that dairy farm operations have an impact on their rural communities far beyond providing a high quality, nutritious products. Dairy farms are job creators and tend to be a strong investor in their local community both with vendor purchases and long term social commitment. The multiplier effect on the economy, reduction of the tax burden on local economies, the maintenance of open space and many other secondary effects of dairy farming should be addressed by Federal and State support for dairy farms with funds not traditionally targeted for dairy operations. While the economic and production trends of the dairy industry continue to show increased consolidation of milk production, the Secretary has reminded this committee that the USDA must be aware of the needs of all farmers, not just those in large scale production agriculture. Some of the different policy and program areas that would benefit farm profitability and also address the social, economic and environmental challenges to farm profitability and provide a nationwide supply of milk have been outlined above.

Funding the EQIP program will provide cost share monies for many production practices, including improving pasture and manure handling systems within a Comprehensive Nutrient Management Plan (CNMP). An example of a benefit of EQIP funds is the 100 cow herd of John Kokoski in Hadley MA who bottles all his milk and sells it direct to the consumer. Hadley is a growing residential community with a strong agricultural base. This scenic community is bordered on the west by the Connecticut River and on the south by the Mount Holyoke Range. Concerns facing a small dairy farm here are much the same as across United States: development pressure is strong; issues with residential neighbors are common; and operating costs are high. On the other hand, with a strong customer base close at hand, direct marketing is a viable and profitable option for many small farms in the western Massachusetts area. Kokoski foresees a need for future assistance from NRCS as his farm needs change and environmental consciousness grows.

"In this global environment where everyone is concerned with water conservation and water purity, I think everybody is somewhat conscious of what we're doing to the environment. I think everybody should have a passion for maintaining the environment for the future." [73]

73 http://www.ma.nrcs.usda.gov/news/ourpurpose/customers/Kokoski.html

As many exit the dairy industry we need to ensure there is a path for new entrants and generational transfer which acknowledges the capital requirements of establishing a viable dairy operation. The USDA-FSA Farm Loan Program (FLP) is an important source of credit to dairy producers and targets a significant portion of its funds to beginning farmers. As Wisconsin is the largest customer of the Farm Loan Program and approximately 90% of FLP borrowers in Wisconsin are dairy producers, there are some lessons to be learned from their experience. They do an excellent job of outreach to farmers. They partner with many other entities that can help them more effectively serve farmers including the Wisconsin Department of Agriculture, Trade and Consumer Protection, Wisconsin Technical College System, University of Wisconsin School for Beginning Dairy and Livestock Farmers, and others. FSA has developed strong working relationships with commercial agricultural lenders to broaden the scope of its loan guarantee and interest assistance programs. Wisconsin FSA FLP views itself as a partner with private agricultural lenders, and the lenders look at FSA FLP in that way as well. In many cases, the private lender has part of the financing package and FSA has part of the financing package. Despite maintaining a large loan portfolio with borrowers who were unable to obtain commercial credit, Wisconsin FSA FLP has experienced relatively low delinquency rates. In FY 2009/10, approximately 1.93% of the direct loan portfolio and 0.88% of the guaranteed loan portfolio was delinquent. By commercial lending standards, these delinquency rates are relatively low, particularly considering the poor economic conditions in the dairy industry during the period.

It is apparent that certain geographies have leveraged the Farm Loan Programs more effectively than others. DIAC recommend that FSA examine why these disparities exist and develop strategies to share best practices across regions.

With the consolidation of dairy processors, distribution, warehousing and retailers, the infrastructure that enabled dairy farmers to diversify and bring a unique dairy product to the market has disappeared. Programs that provide grant money and technical assistance to assist the establishment of valued-added dairy processing benefit the individual farmer or group of farmers and also increases the consumption of fluid dairy product as consumers value the authenticity and integrity of a product with a "farmer's face."

Conclusion

DIAC recognizes that this recommendation is intended to impact the 2012 Farm Bill and will be subject to tight budgetary constraints, congressional pay-go rules, a smaller CBO baseline, budget reconciliation, and a looming Federal budget deficit. The intent of this recommendation is to provide ongoing support to dairy operations to face the challenges and demands of dairy farming in the twenty first century rather than the need for emergency payments in times of economic stress. DIAC recommends that EQIP and other programs discussed above be fully funded in the 2012 Farm Bill. DIAC recommends that the Secretary support the funding and implementation of these and other programs that will provide cost share or full cost grants to enable dairy farmers to increase innovation in marketing of dairy products; improve dairy farm production methods; enable dairy farmers to make capital investments in their operations in anticipation of regulatory changes; and provide ongoing support to dairy farm families that will enable them to have a positive impact on their rural communities economically, socially and environmentally.

Dairy Management Practices and Production Costs – Corn Based Ethanol Subsidies

Recommendation 22:

PHASE OUT ETHANOL SUBSIDIES. We support the rapid phase out of the blender's credit and tariff on imported ethanol.

Background

The Volumetric Ethanol Excise Tax Credit ("VEETC"), also known as the "blender's credit", is the primary federal tax incentive for the use of ethanol. The tax credit, which was created by the American Jobs Creation Act of 2004, provides blenders and marketers of fuel with a federal tax credit of 45¢ on each gallon of ethanol blended with their gasoline. President George W. Bush signed into law the Energy Independence and Security Act of 2007, which mandated 9 billion gallons of renewable fuels be used in 2008 and 36 billion gallons of renewable fuels to be used annually by 2022. Of the total, 21 billion gallons must come from sources such as cellulose (i.e., corn stalks, wood chips, switchgrass, etc.). The Act requires 12.6 billion gallons of conventional ethanol (or about 4.5 billion bushels of corn) be used in 2011 and 15 billion gallons (5.357 billion bushels) by 2015. Ethanol blenders receive a 45¢ per gallon tax credit on all ethanol blended through 2015 and a 10¢ gallon tax credit on the first 15 million gallons of ethanol made by companies that produce less than 60 million gallons per year. The tax credit of 54¢

per gallon is applied to all ethanol blended in the US and a registered blender is the only individual in the supply chain that is eligible for this credit, and it can only be taken once. This credit is now refundable quarterly, and all funds are paid out of the General Fund of the federal budget.

In December 2010 this credit and tariff were renewed for one year by Congress. That was opposed by many environmentalists and by other industries that use corn, including livestock producers. *"The federal government should not waste another $6 billion on this needless subsidy,''* a coalition that included the American Meat Institute, the National Taxpayers Union, the National Wildlife Federation and the Snack Food Association declared. Among the foes' arguments was that with federal quotas in place for minimum use of ethanol, the subsidy would not increase the volume sold. The proponents of the credit and tariff had an opposing view. Bob Dinneen, the president and chief executive of the Renewable Fuels Association, said that, *"Extending these key incentives for American ethanol production and use will help save American jobs and provide the market stability allowing the industry to continue to grow. Congress has struck a blow to the oil status quo and extended important tax policies that will allow America's ethanol industry to grow and evolve.''*

In 2010, heavy summer rains and some excessive heat resulted in lower-than-expected U.S. corn yields. These lower yields, combined with the failure of the Russian wheat crop and a weaker U.S. dollar, increased corn prices by about 50% in just six months. On December 10th 2010 USDA forecasted that world corn inventories will slide 12 percent to a four-year low of 130 million metric tons at the end of the current season as demand outstrips production. For operations that buy their feed, the increase has had a dramatic effect on their costs of production, since the pricing of other commodities are linked to the price of corn and the price of corn is now linked to the price of oil. The challenge that dairy operators face is adjusting to an immediate situation whereas most feeding strategy changes are fairly long term decisions that take a while to implement. Although farmers can adjust their purchases of inputs in response to the margin squeeze, there is only so much one can do before the implication for production or the health of the cow does not justify further reductions in the use of an expensive input. Moreover, although there are a variety of feedstuffs available to farmers, there are only so many feed inputs possible in a balanced ration. In 2011, industry projections are that dairy feed costs will be a larger problem for dairy producers than low milk prices with March-delivery corn priced at $6.2025 a bushel.

The renewal of the blender's credit and tariff for ethanol together with the renewable fuels mandate follows a policy that created a new use for one quarter of the corn crop. This increased use of corn and the subsequent increase in price for all feed inputs has an undeniable effect on dairy profitability. A continuation of the decrease in the milk price-feed cost margin for dairy farmers, despite higher milk prices, will result in a major devaluation of all dairy-related assets including cows, equipment and facilities, aggravating the precarious economic situation in which all dairy farmers found themselves in 2009 and 2010.

Discussion

There are common arguments about how much energy is needed to produce ethanol and the conflict between using corn for food or fuel. The majority of current research indicates that ethanol is a net-positive system, with a ballpark estimate of 1.34 (for every unit of energy put into the system, ethanol yields 1.34 units of energy).[74] In states where corn yields are higher or in facilities where technology is newer, the energy balance is probably even higher. The energy balance question depends on corn yields per acre, technology and petroleum based fertilizers to produce corn, and technology of the ethanol facilities. Some ethanol facilities are increasing efficiencies of their operations by building cattle feedlots next to the ethanol facilities. In the 2007/08 marketing year, the U.S. ethanol industry generated approximately 23 million tons of high-quality feed for beef cattle, dairy cows, swine and poultry, making the renewable fuels sector one of the larger feed processing segments in the United States. Manure from the cattle is captured and put into a digester where methane from the manure is captured and used to generate electricity to run the ethanol facility. Such "closed-loop" systems claim to have much higher efficiencies of production.

Ethanol is not as fuel efficient as gasoline. For blends of E10 (10 percent ethanol) there is no noticeable drop-off in mileage. For blends of E85 (85 percent ethanol), there is a reduction in fuel mileage compared to gasoline.[75]

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74 http://www1.eere.energy.gov/biomass/net_energy_balance.html

75 *"Flexible Fuel Vehicles operating on E85 usually experience a 25–30% drop in miles per gallon due to ethanol's lower energy content."* West, Brian H., Alberto J. Lopez, Timothy J. Theiss, Ronald L.

In discussing the effect of the ethanol tax credit, opinion varies. The Renewable Fuels Associations states that the credit has played a vital role in the expansion of the U.S. ethanol industry and removal of it would ultimately reduce the market price of ethanol and seriously affect the profitability of producing ethanol in the United States. The Association maintains that in the absence of the tax credit, many ethanol producers would be forced to cease production and other producers may cut output or declare bankruptcies which would directly affect jobs and other economic benefits to largely rural communities. Domestic production would be replaced by ethanol imports to the extent possible, thereby further increasing U.S. energy dependency on foreign supplies and jeopardizing U.S. energy security.[76]

An unusual coalition of different industries affected by the credit and tariff, including environmentalists, American Meat Institute, the National Taxpayers Union, the National Wildlife Federation and the Snack Food Association have a different assessment of the renewal of the tax credit and tariff. They maintain that the recent corn and soybean price increases have starkly revealed the economic consequences of U.S. ethanol policy. The coalition argues ethanol mandates, demand subsidies, and import barriers reduce the ability of world feed markets to cope with unexpected supply disruptions by forcing most of the adjustment to take place in the livestock industry rather than in the ethanol industry. Because the demand for livestock feed is relatively price insensitive (demand is inelastic), supply disruptions, such as a failure of the Russian wheat crop, can have great impacts on feed costs, with resulting financial difficulties for livestock feeders. The livestock industry is not in a good position to recover those increased costs without dramatically affecting consumption of their products. Opponents of the credit and subsidy argue that the dramatic increases in the prices of corn and soybean meal that we are currently experiencing are a direct result of our current ethanol policy, which forces demand adjustments in the livestock sector rather than in the sector (blended gasoline) that can more

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Graves, John M. Storey, and Samuel A. Lewis. 2007. Fuel Economy and Emissions of the Ethanol-Optimized Saab 9-5 Biopower. SAE Technical Paper 2007-01-3994.

76 IMPORTANCE OF THE VEETC TO THE U.S. ECONOMY AND THE ETHANOL INDUSTRY Prepared for the Renewable Fuels Association by John M. Urbanchuk, Technical Director, ENTRIX, Inc.

easily adjust. [77] The EPA's recent policy decision to allow higher blends in the U.S. gasoline supply should facilitate blenders' freedom to take advantage of inexpensive ethanol when corn supplies are abundant and adjust to the market without the need for mandates, tariffs and credits.

Conclusion

The DIAC supports the rapid phasing out of the blender's credit and tariff on imported ethanol as the effect of the mandate, credit and tariff has uncoupled corn prices from demand for feed, and threatens to continue to do so even if additional cellulosic sources are developed. It does this by directly raising the price of corn and by increasing the competition for acres for other crops such as soybeans and alfalfa. High feed costs have contributed to the economic volatility and unprofitability that has beset dairy farmers since 2008 and over the long term, higher corn prices will have to be reflected in higher consumer prices for meat and dairy products. Increased costs will affect the ability of US dairy farmers to compete on the world market which has many low cost production competitors. As the US milk price is affected by the world price, a low world price with inflated high domestic costs of feed will reduce the margins of US dairy farmers to an unacceptable level resulting in farmers leaving the industry or increased government subsidy to maintain family dairy farms. While the committee recognizes the benefits of ethanol production to corn growers and the rural community, we recommend that the Secretary support phasing out the blender's credit and tariff on imported ethanol acknowledging that the ethanol industry has matured and become more efficient and only needs the protection of the renewable fuels mandate to grow and expand production. The one year extension of the tariff and credit has given the opportunity for all those affected by the issue to work towards a satisfactory compromise. Without the blender's credit the corn market will be able to adjust to changes in supply to reflect the most efficient use within a free market and level the playing field for availability and price for both livestock and ethanol use.

Summary and Conclusions

77 Impact on Ethanol, Corn, and Livestock from Imminent U.S. Ethanol Policy Decisions by Bruce A. Babcock, Center for Agricultural and Rural Development or Iowa State University.

Appendix A

Summary of Dairy Product Price Support Program (DPPSP)
Objectives: Price Support - prevent farm price of milk from falling below a target level by purchasing dairy commodities specified by Congress at specified minimum prices. The underlying objective is variously described as to create greater price stability or to enhance farm prices and income. Minimize impact on commercial sales when disposing of government stocks
Methods: USDA/CCC offers to purchase butter, cheese, and nonfat dry milk, according to established specifications, at the announced purchase prices. If this price is appealing to manufacturers of those commodities, compared to prevailing or expected market prices, the manufacturer initiates a "response" to USDA's "invitation. CCC takes ownership of the product and is expected to dispose of the product in a manner that recognizes its value as a food product but which does not undermine the commercial market for similar products. This may include domestic and international food assistance, use in government programs and facilities, use in animal feeds, and the like. If a product is offered for sale in commercial channels, its price must equal or exceed the established Sellback Price. Sellback Prices are currently 110% of purchase prices.
Legal Authority: Agricultural Act of 1949 (as amended)
Administering Agency: U.S. Department of Agriculture - Farm Services Agency Farm Programs - Price Support Division Commodity Operations - Commodity Credit Corporation

Summary of the Milk Income Loss Contract (MILC)
Objectives: Income Support - augment dairy farmer income when milk prices are low
Methods: Provide a countercyclical payment to qualified dairy farmers when the Class I price announced for the Boston city zone of the Northeast Federal Milk Marketing Order falls below a legislatively specified value. In addition to setting the benchmark or target price, the law also specifies a percentage of the difference between the target price and the announced price. The payment rate is based on that percentage. Total payments are limited to a specified amount of milk marketings (pounds of milk sold) per farm. In each marketing year, qualified dairy farmers must elect the month in which they are first eligible to begin receiving a monthly MILC supplement. Payments are made in each consecutive month in which a payment is due until the annual limit on marketings is reached.
Legal Authority: Food, Conservation and Energy Act of 2008 (FCEA). The MILC was first authorized under the Farm Security Act of 2002 (FSA). But, its legislative origin traces to emergency market transition assistance authorized under the Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2000 (H.R.1906).
Administering Agency: U.S. Department of Agriculture - Farm Services Agency Farm Programs - Price Support Division

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Summary of Federal Milk Marketing Orders (FMMO)
Objectives: Orderly marketing (not specifically defined) Adequate supplies of milk for fluid purposes
Methods: Classification of producer milk according to the product in which it is used and minimum pricing of milk according to class Pooling the values paid by processors for each class of milk to return a common "pool" price to all producers, regardless of the actual destination of their milk Auditing to ensure and enforce compliance by regulated handlers
Legal Authority: Agricultural Marketing Agreement Act of 1937 (as amended)
Administering Agency: U.S. Department of Agriculture - Agricultural Marketing Service - Dairy Programs

Summary of the Dairy Export Incentive Program (DEIP)
Objectives: Increase sales of US dairy products in foreign markets, particularly to offset export subsidies from other countries Encourage dairy product marketers to export
Methods: Provide cash subsidies to dairy product exporters by supplementing privately negotiated export prices.
Legal Authority: Created under the Dairy Production Stabilization Act of 1983 and initiated in May 1985. Reauthorized under the Agriculture, Conservation, and Trade Act of 1990, the Uruguay Round Agreements Act of 1995, and the Federal Agriculture Improvement and Reform Act of 1996.
Administering Agency: U.S. Department of Agriculture - Foreign Agricultural Service

Appendix B – Review of Supply Management Programs

Industry advocacy groups have put several supply management plans forth in recent months. Supply management in agricultural commodities is not a new concept. Marketing quotas have been used in the U.S. and other countries as a way to control prices with varying degrees of success. Although there has never been a Federal mandatory dairy supply management program, with the exception of assessments, Federal policy actions in the early 1980s attempted to reduce milk supplies during a tenuous price period. Cooperatives Working Together (CWT) is a voluntary supply management program operated by several of the nation's dairy coops and independent producers as a way to reduce domestic supplies of milk and/or dairy products. It is useful to review these and other supply management programs as the committee debates the future direction of U.S. dairy policy.

A study from Informa Economics78 on behalf of the International Dairy Foods Association categorizes supply management programs as five different types. It is important to differentiate supply management programs because they are not all the same.

Program Type	Attempted In	Description
Revenue Sharing Quota	Canada (1960s), California (current)	Does not restrict overall production, but farmers are paid more for milk "within quota"
Marketing Quota	Canada (current), EU (current)	A strict cap on total milk marketed by each farm. A penalty is charged if farmer overproduces
Assessments, Co-Responsibility Fees, Levies	Canada, EU, and US at various times	The government charges a tax on each unit of milk produced when supply exceeds demand.

78 Informa Economics. " An International Comparison of Milk Supply Control Programs and Their Impacts." September 2010. Paper presented by IDFA to DIAC.

Program Type	Attempted In	Description
Paying farmers not to produce	EU (1976-80), US (1984-85)	The government pays a farmer to reduce his production from a base level
Paying farmers to retire	EU (1985), US (1986-87,2003-10)	A subsidy is paid to slaughter or export a farmer's entire dairy herd

The policies above create either an incentive or a disincentive for a producer to take a given action to reduce supplies. The policy levers being applied in these situations have ramifications for costs and effectiveness of the programs. This report will examine U.S. and international attempts at supply management for dairy and other commodities. A thorough review of these programs will help the committee better understand the implications of the various supply management or market stabilization schemes for the U.S. dairy industry.

U.S. Crops

Supply management/quota programs for U.S. crops grew out of the first Agricultural Adjustment Acts of the 1930s. Marketing quotas for wheat, cotton, rice, sugar, peanuts and tobacco were all utilized at different points during the 1900s. Quota programs for peanuts and tobacco ran from the 1930s until buyouts were ultimately offered to peanut quota-holders in 2002 and tobacco in 2004. Provisions in the 2002 Farm Bill allocated funding to the buy-outs driven by a need for greater market-oriented support policies. In general, U.S. agricultural policy has attempted to move toward more market-oriented solutions and away from supply controls and set-aside programs (with the exception of the Conservation Reserve Program) in the last 20 or so years.

Peanuts and tobacco were able to survive the removal of their quota systems and adapt to their marketing environments. According to a 2009 ERS study,79 "The remaining producers farmed more peanut and tobacco acres, operated larger farms, and are generally in as good financial condition today as the average farmer preceding the buyout." These farms have utilized risk management, contracting

79 Dohlman, et al. "The Post-Buyout Experience: Peanut and Tobacco Sectors Adapt to Policy Reform." November 2009. Economic Information Bulletin No. (EIB-60).

options, and now qualify for other farm programs. Prices remain below quota levels, but those price levels have revived demand and helped drive export markets, especially for peanuts. Production shifts also occurred, as better growing regions saw increases in production.

Sugar remains the only "program" commodity with a domestic quota in the form of marketing allotments. USDA is responsible for examining the domestic and international markets and determining allowable market allocations for processors and allowable import levels.80 The sugar program has come under fire for artificially raising the price of sugar to U.S. and international consumers. Prices for sugar tend to be stable but generally remain above the world prices. High over-quota tariffs are an important element of the program. Certain specialty crops, like cranberries, are permitted to use quotas in their marketing orders.81 Cranberry markets have been used sparingly in the last 35 years and only when prices were severely depressed.

U.S. Dairy Supply Control Measures

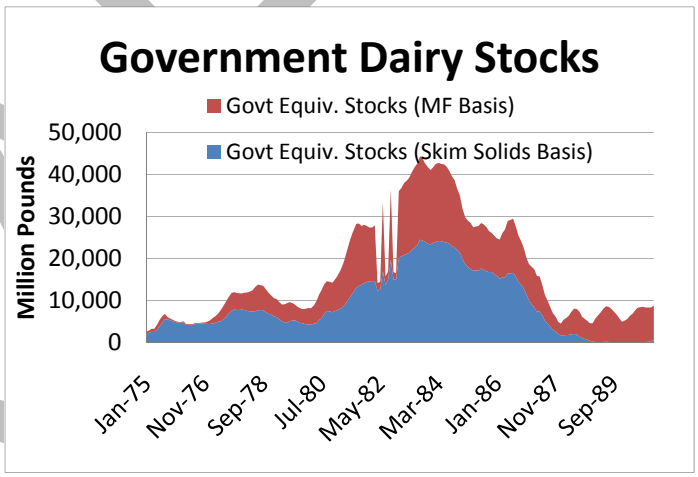
As previously mentioned, the U.S. Government has not operated a mandatory supply management program for dairy. However, attempts to incentivize reductions in milk marketings at the national level were offered in the early and mid-1980s as a way to reduce bulging market supplies. Two programs that mostly closely resemble voluntary supply management programs were the Milk Diversion Program (MDP) and the Dairy Termination Program, also known as the "whole-herd buy-out."

80 USDA-ERS. "Sugar and Sweeteners: Policy." Updated January 7, 2009.

81 Jesse, E. and B. Cropp. "Use of Mandatory Supply Control in the U.S. Dairy Sector." Revised June 2006. U-W Marketing and Policy Briefing Paper.

Assessments on Milk Production

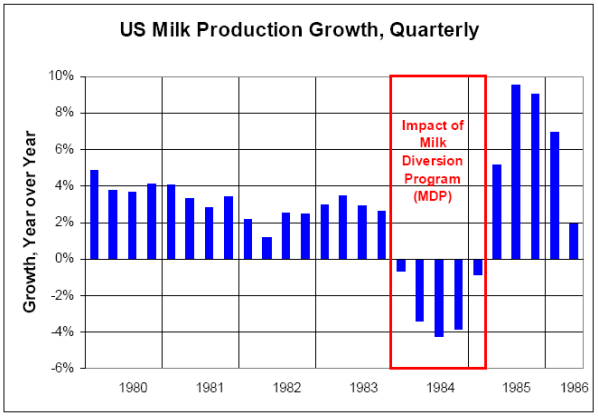
Leading up to the dairy policy interventions in the 1980s, the surpluses of U.S. dairy products were building. Manufactured milk support prices had steadily increased because they were determined by the parity index, which attempted to keep the same relationship between milk prices and farm costs as existed in the period of 1910-14. In 1973, the Agricultural Act of 1949 was amended to raise the minimum support from 75% to 80% of parity. The Agricultural and Consumer Protection Act of 1977 continued the minimum support level of 80% of parity through April 1, 1981 and required that the support price be adjusted semi-annually (October 1 and April 1) to reflect changes in the index of prices paid by all U.S. farmers for all purchased inputs.82 This encouraged over-production to the point where the domestic markets could not absorb the excess and huge government stockpiles developed at a large cost to the government. The government spent $2 billion in USDA's Commodity Credit Corporation (CCC) purchases in the 1980-81 marketing year alone. Despite the fact that support prices were frozen at $13.10 and subsequently disconnected from parity at the end of 1980, inventories continued to build. The Omnibus Budget Reconciliation Act of 1982 levied $0.50/cwt. assessments on producers to help pay for the price support program. The assessments did not curb spending on CCC purchases, as costs hit $2.6 billion in 1982/83. The government levied another $0.50 assessment on producers beginning on September 1, 1983 but it was refunded if a producer reduced his or her milk marketings by a target amount. These assessments did little to reduce overall milk production growth, so the government got more creative.



Dairy Diversion and Termination Programs

82 Cropp, Bob. "Dairy Price Support Program Options".

Congress passed the Dairy Production and Stabilization Act of 1983 in November of that year. That Act created a 15-month milk diversion program, reauthorized the assessments on milk production to pay for product storage and milk diversions, created the dairy check-off promotion program through a $0.15/cwt. assessment, and lowered the price support program from $13.10 to $12.60/cwt. USDA was also given the authority to reduce the support price if CCC purchases exceeded certain levels.



Source: USDA

The milk diversion program was the nation's first voluntary supply management program. It paid producers to reduce their milk marketings by 5 to 30% over a fifteen month time period from January 1984 to March 1985. Approximately 38,000 participants were paid $10.00/cwt. for milk reduced from their base. Milk production declined for the five quarters following the institution of the program. GAO estimated that the program reduced milk supplies by 3.74-4.11 billion pounds below what could have otherwise been expected.83 $955 million was paid to producers. During this time CCC purchases and inventory building slowed. GAO estimated that $614 to $664 million in government costs was avoided. However, the stock situation did not disappear. Milk production rebounded after the program ended, and many believe that, had the market been left to its own devises, some of this production reduction would have come naturally. As previously mentioned, stock building was reduced, but an overhang of dairy supplies depressed the marketplace.

The 1985 Food Security Act authorized the Dairy Termination Program. The Dairy Termination Program, also known as the "whole-herd buyout" offered dairy farmers the option to submit bids in exchange for liquating their milking herds. Producers who were accepted into the program had to either slaughter or export animals 18 months or older between April 1, 1986 and August 31, 1987 and agree to idle their operations for 5 years. About 14,000 producers who shipped around 12.3 billion pounds of milk

83 GAO. "Effects and Administration of the 1984 Milk Diversion Program." 1985. US GAO/REC-85-126.

were accepted into the program. The producers received payments totaling $1.8 billion.84 The program was funded by producer assessments and Federal dollars. GAO found that the termination program in addition to reductions in price supports were a cost effective way to reduce the quantity and expense of government programs, and the program benefited consumers by $3.3 billion and cost producers $2.3 billion. While the program resulted in reduced milk production, red meat prices remained depressed for most of that time, placing economic pressure on the beef sector. The U.S. Government responded with additional purchases of red meat during this time.

A 1992 study by Bausell, et al.85 examined the effectiveness of the termination and diversion programs, in addition to the lowering of price supports. This analysis determined that the termination and diversion programs meaningfully addressed the problem but were ultimately incomplete or impermanent in their effects. Policy actions of this sort do not generally lead to long-term structural changes in the industry, rather they create short-term shifts in supply. They further explain that the impacts of the milk diversion program were shorter-lived than those of the termination program. Both programs did yield some slight government and consumer savings, but the most impactful of all the programs was the reduction in government price support levels.

California Dairy Quota

The state of California has operated a quota system since 1969. Producers who operated during 1966 or 1967 and sold to fluid bottlers were granted an annual fluid milk quota (i.e. base) equal to their shipments plus 10 percent. Producers who do not have quota are not taxed or restricted from shipping. Rather, they receive a "non-quota price" for their milk. At one point, this price was close to the weighted average value of the cheddar and butter /dry milk values but, subsequent to the implementation of a fixed $1.70 differential between quota and over-base milk in the early 90s, the non-quota price may fall below the manufacturing values. Quota pricing did not stop the growth of milk production in the state because it

84 GAO. "Dairy Programs: Effects of the Dairy Termination Program and Support Price Reductions." June 1993. GAO/OCE-93-1.

85 Bausell, C. et al. "An Analysis of 1980s Dairy Programs and Some Policy Implications." August 1992. American Journal of Agricultural Economics. Vol. 74, Num. 3, pp.605-616. Print. Abstract only available online.

was not accompanied by a corresponding limitation on production. Milk production totaled 8.9 billion pounds in 1969 and has grown to 39.5 billion pounds in 2009. That is a 344% increase in production while the quota has been in place. The quota pricing system was not necessarily designed to control supplies – rather it was a way to hold producers who had fluid contracts harmless when pooling was introduced in the state order. Thus, quota pricing has done little to affect amount of milk produced in the state but the $1.70 spread between quota and non-quota milk does have some parallels with concepts that discount prices on new milk production to discourage growth.

U.S. Cooperatives Working Together (CWT)

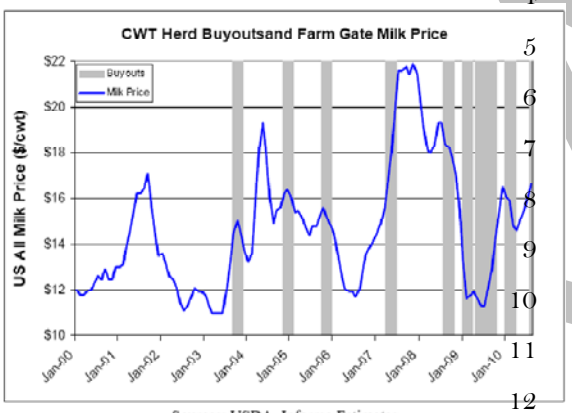
The National Milk Producers Federation as a way to "strengthen and stabilize producer milk prices by taking actions as necessary to positively impact supply and demand" created the Cooperatives Working Together (CWT) program in 2003. CWT is an example of a voluntary, industry-drive supply management program. It is run by a committee of producers from the member cooperatives and individual producer representatives. Funding for the program comes from a voluntary $0.10/cwt. assessment of producers' marketings.

Historically, there have been two components of the program – herd retirement and export assistance. The decisions to activate the program are based on the outlook for milk prices and producer margins. The herd retirement works similarly to the Federal whole-herd buyout whereby producers voluntarily bid to slaughter their cattle. One difference is that producers may repopulate their facilities by forfeiting a portion of their payment in the case of CWT. Producers are paid for 12 months of production and must send all cows and dry cows to slaughter. In the past, there have been optional heifer retirements. Ten herd retirement rounds have been conducted.

Round	Announced	Farms Retired	Cows Retired	Heifers Retired	Average Price per cwt/milk	Average Price per cow	Total Cost
1	Jul-03	299	32,724		$4.03	$749	$25,451,030
2	Sep-04	363	51,700		$5.24	$1,005	$51,450,000
3	Aug-05	442	64,000		$6.75	$1,266	$85,050,000
4	Feb-07	333	52,783		$5.50	$1,042	$58,866,000
5	Jun 08	203	24,860	275	$6.10	$1,059	$26,625,070
6	Oct-08	186	50,630	1,240	$6.49	$1,251	$64,861,531
7	Apr-09	367	101,040	818	$5.76	$1,119	$113,033,000
8	Jul-09	274	74,114	2,958	$5.58	$1,146	$84,967,000
9	Oct-09	143	25,620	372	$5.25	$1,059	$27,402,900
10	May-10	180	33,409	0	$3.75	$730	$24,375,000
Total		**2,790**	**510,879**	**5,663**	**$5.70**	**$1,100**	**$562,081,530**

Source: CWT Press Releases, CWT Financial Statements, Informa Economics Estimates

The herd retirements have worked with varying degrees of success. The graph below shows the relationship between the U.S. All-Milk price and the herd retirement periods. Eventually, the expectation that CWT would offer herd retirements slowed culling that probably would have happened otherwise. CWT was the primary vehicle for removing dairy cattle from the market in 2009. CWT analysis by FAPRI shows positive impacts on milk prices over the life of the program. However, markets and producers have fully adapted to the program. In essence, CWT worked best when the market did not expect a removal. For this reason CWT has announced a discontinuation of the herd removal program and a new focus – export assistance.



Sources: USDA, Informa Estimates

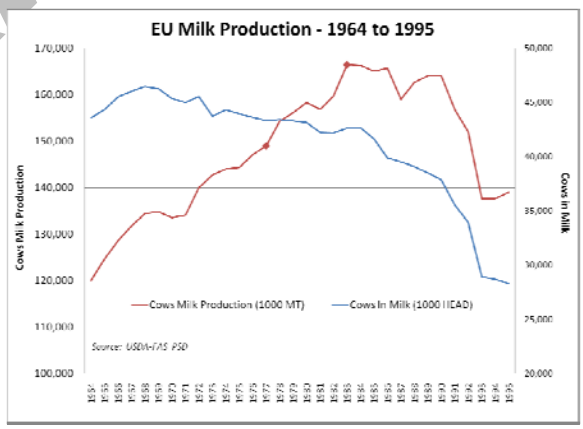
European Supply Management Programs

European dairy policy has been in a constant transitional state since the European Economic Community (EEC) was formed in the 1960s. In the past fifty years, the E.U. has dabbled with price supports, target prices, levies, intervention purchases, export subsidies, and quotas to deal with dairy markets. The EU dairy policy has experienced some of the same growing pains as the U.S. dairy industry and has tried many of the same policy interventions. To date, CAP reform in the mid-2000s left the European dairy industry with intervention purchases (similar to U.S. DPPSP), export subsidies (much

larger than U.S. DEIP), and decoupled direct "green" payments (U.S. currently has a counter-cyclical payment, MILC).

The major difference between U.S. and European dairy policy is the marketing quota. The EU's Common Agricultural Policy (CAP) made many attempts to regulate supply, demand, and producer prices via price supports, target prices, and levies. Unfortunately, production continued to grow, as did European intervention stockpiles. In response to the increases in supports with the milk sector's common market organization, milk production was far greater than demand by the late 1970s.86 Beginning in 1977, co-responsibility levies were assessed on milk production in order to reduce pay prices and help pay for the cost of dairy programs.[35] It was also hoped that these levies might reduce production, as willing farmers were compensated for converting their dairies into beef operations. These taxes ranged from 0.5 to 3.0% of the target price.87 The graph showing EU milk production from 1964 to 1995 depicts the lack of impact that the levies had on E.U. milk production. From 1997 to 1984, European milk production grew by 12% from 150.0 million MT to 166.3 million MT.

In 1984, the EU devised the "super-levy" and the milk production quota. Quota levels for most member nations were set at 1981 levels plus 1 percent[26]. Irish and Italian levels were based on 1983 deliveries. Any milk delivered over the quota faced a "super levy" of 75-100%[26]. Co-responsibility levies remained. The super levy was ultimately increased to 100-115% of the market value of over production in 1989 when the quota was increased due to court challenges[26]. Each country was responsible for determining how to divvy up its quota, but no national trading of quota is permitted (i.e. Germany cannot obtain more quota from France.) Quota can be traded (purchased, sold, or



86 EC Working Paper. "Commission Working Document – Report on Milk Quotas." October 2002. SEC (2002) 789 Final.

87Bailey, Kenneth. Marketing and Pricing of Milk and Dairy Products in the United States. Iowa: Iowa State University Press, 1997. Pp. 227-229.

leased) within a country. Originally, many of the nations tied quotas to specific land bases. Despite the presence of the quota, Europe dealt with heavy supplies through the 1990s and 2000s.

The early 2000s brought about European CAP reform. From 1988-92, the Common Agricultural Policy represented nearly 61% of the total EU budget.88 The expense of the CAP has led to many reforms, including decoupling payments from production and lower price supports. As part of the 2003 CAP reforms, the EU decided to abolish dairy quotas in 2015. Quota abolition is being phased in by annual quota increases – the "soft landing." Despite the disastrous conditions in 2009, the EU is continuing with its plan to phase out quotas. Much of the drive to abolish quotas comes from an exerted effort at trade liberalization and more market-oriented policies within the EU. Even with the quota, the dairy industries in various nations are consolidating. In Denmark, the average herd size is 101 cows.89

Canadian Supply Management System

Canada has a long history of supply control for many commodities, including dairy, eggs, and poultry. The national Canadian dairy program serves three functions: 1) To control domestic production through marketing quotas, 2) control imports through arbitrarily high tariff levels, and 3) pricing and pooling to ensure profitability for producers. The Canadian system is probably the most stringent dairy supply management program in the world. Canadian Dairy Commission (CDC) runs two portions of the program.

Similar to other national dairy interventions, the Canadian dairy program was born from stress in the industry. The country experimented with price supports and provincial and regional quota programs prior to the creation of the Canadian Supply Management Committee (CSMC) in 1974.90 Subsequently, the National Milk Marketing Plan created the Market Sharing Quota (MSQ). The program allocated quota amounts to the various provinces at the beginning of the program, and the provinces were charged with distributing quota to producers. Like Europe, quotas cannot be transferred among provinces.[29] In

88 EU Press Release. "EU Budget – Myths and Facts." September 2007. Reference: MEMO/07/350

89 Jongeneel, R. et al. "European Dairy Policy in the Years to Come – Quota Abolition and Competitiveness." March 2010. LEI report 2010-017.

90 Canadian Dairy Commission. "History of the CDC." Modified May 2010.

Canada, quota is a legal right to produce – you cannot produce without it. Prospective producers can purchase quota from existing producers to establish a dairy, but current quota rates are generally prohibitive. Current quota prices exceed C$25,000/kg in all provinces outside of Ontario and Quebec where the provinces instituted a C$25,000 ceiling91. In order to establish a 75-cow dairy, a farmer would need over C$2 million to purchase quota.

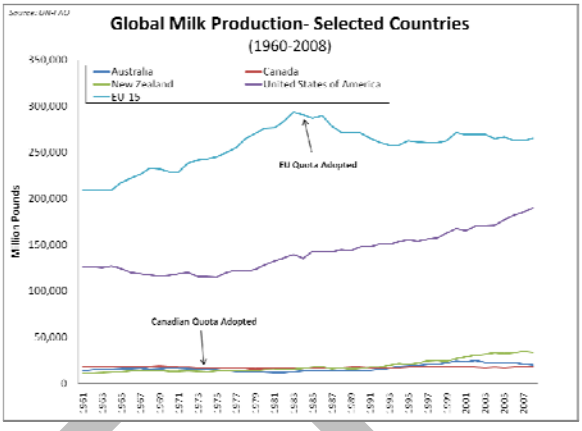
The CDC, via the CSMC, is charged with setting the national milk production target for industrial milk in Canada, or Market Sharing Quota.[38] The CSMC will monitor the domestic and international markets and attempt to determine the milk supply that, when coupled with estimated demand, will achieve target prices for producers. The MSQ is calculated based on the previous year's domestic consumption, anticipated changes in demand, projected dairy stocks, import commitments, and export obligations. Each year, the CDC reviews producer prices for milk based on milk production costs, labor, investments, and macroeconomic indicators and announces a target price that producers will be paid. The CDC is legislated to return a "fair return for efficient producers." The government routinely surveys costs of production in order to make the price determinations. The CDC also operates a price support program for industrial milk.92 Annually, the CDC sets price supports for butter and skim milk powder. The provincial marketing boards use these prices as reference points for setting prices in their regions, and the boards also serve the points for milk price pooling and profit sharing. While the Federal government announces annual quota limits, the provinces are responsible for management and oversight of the quota.

The supply management system is facilitated by very high import tariffs that severely imports. For example, over-quota cheese tariffs are 245.5% but not less than C$4.52/kg.[26]

91 Canadian Dairy Information Center, Milk Quota Exchange - - 2010.

92 Canadian Dairy Commission. http://www.cdc-ccl.gc.ca/CDC/index-eng.php?caId=812&pgId=2187

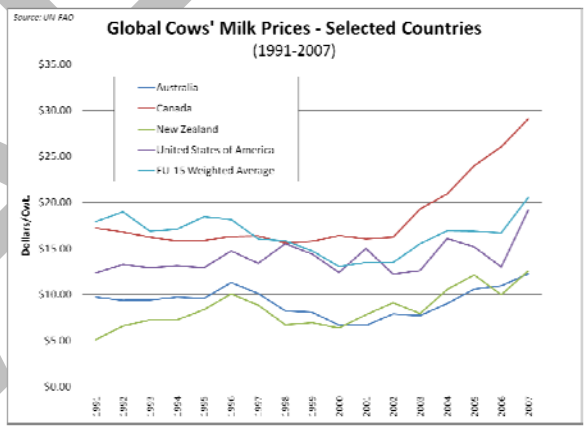
Implications and International Lessons:

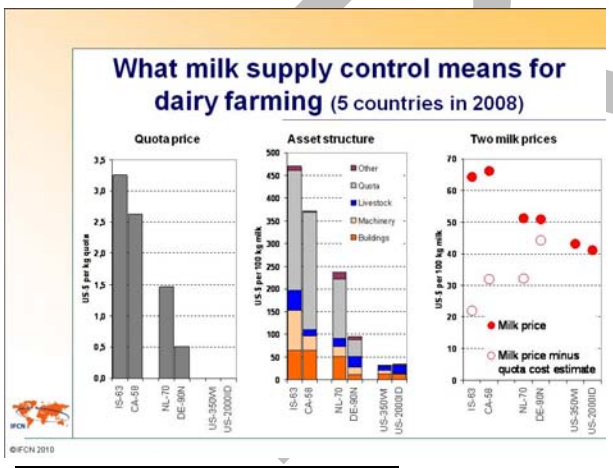


There is little doubt that quota programs in EU and Canada have been successful in managing supplies of milk. These strict quota schemes pose heavy penalties or totally prohibit marketing milk beyond quota levels. Data from the UN shows that EU milk production actually declined considerably from pre-quota levels.

There is also no doubt that the supply management program helps raise producer prices in Canada. The evidence is a little less conclusive for the program in Europe based on FAO data.

However, higher milk prices do not necessarily translate into higher milk prices net of quota costs new entrants into the industry. Based upon IFCN estimates, the prohibitively high cost of quota resulted in a milk price net of quota cost that was below U.S. price levels in 2008.93

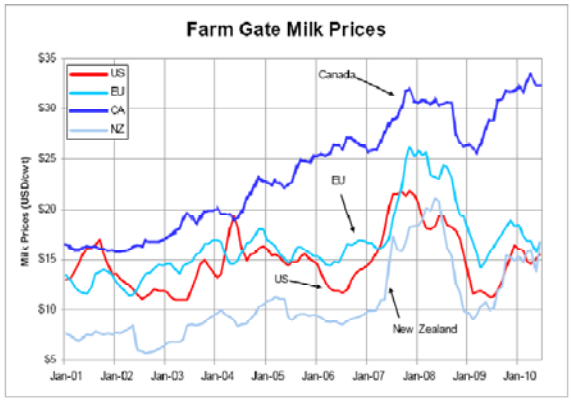




The existence of a strict supply management program also does not indicate that prices are not volatile. Even though Canada is somewhat insulated, Canadian prices have been volatile in recent times.

93 Torsten Hemme (IFCN). "Global Dairy Trends and Their Effect on Volatility", October 2010 presentation to World Dairy Expo.

The commonly held belief that supply management will maintain the number of cattle and the number of farms is inaccurate. Even countries with supply management programs are seeing reductions in total cow numbers, and these reductions, especially in Europe, tend to be more prominent. The more efficient cows become through genetics and management, the fewer cows can be maintained to fit within the quota. According to the Informa report, farm numbers have been reduced in US (-62%), EU-15 (-61%), Canada (-58%), and New Zealand (20%) from 1992 - 2009.



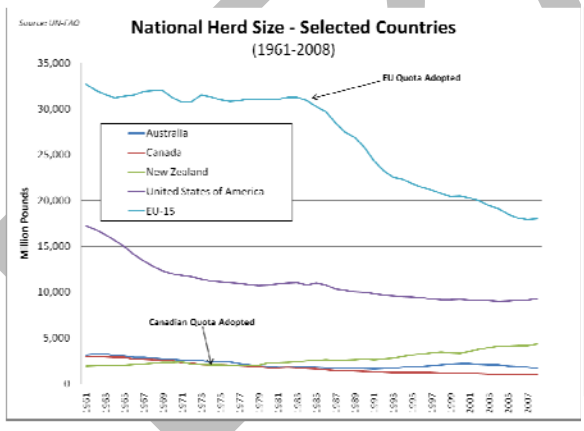
Sources: USDA, LTO-Nederland, CDC, Informa Estimates

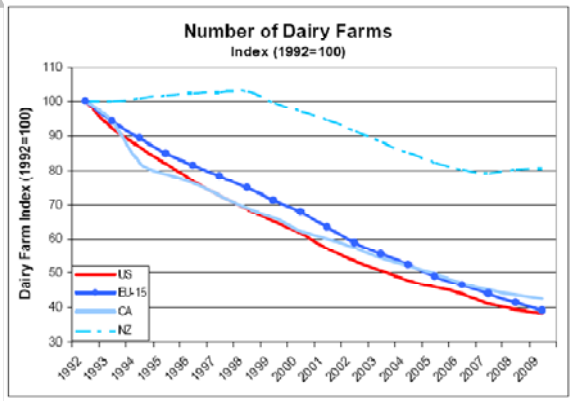
Average Farm Gate Milk Prices (USD/cwt)				
Years	US	EU	CA	NZ
01-06	13.95	14.81	20.27	8.46
07-10	16.40	19.19	29.87	14.49

Standard Deviation of Farm Gate Prices				
Years	US	EU	CA	NZ
01-06	1.93	1.69	3.76	1.35
07-10	3.28	3.62	2.34	3.61

Coeficient of Variation of Farm Gate Milk Prices				
Years	US	EU	CA	NZ
01-06	14%	11%	19%	16%
07-10	20%	19%	8%	25%

Sources: USDA, LTO-Nederland, CDC, Informa Estimates





Sources: Eurostat, DG Agri, USDA, CDC, MAF, Informa Estimates

And finally, supply management can call into question the long-term competiveness of an industry. The attractiveness of imports is one of the factors in this calculation. Available milk supplies for new processing needs are not available in countries that operate under quotas. Countries that operate under

quotas are not well positioned to take advantage of new export markets, as there is no excess supply to release.

Proposed U.S. Supply Management Programs

The acute level of economic stress in the U.S. dairy industry has reignited the debate about mandatory supply management programs in the United States. Thus far, two programs have gained the most attention from producers, policy makers, and policy analysts. Both of these programs differ from the supply management programs described for other countries in significant ways. In 2010, Representative Jim Costa (D-CA) introduced H.R. 5288, "The Dairy Price Stabilization Program of 2010." A companion bill, S. 3531, was introduced by Senator Bernie Sanders (D-VT) and is similar in many ways. The Costa-Sanders bill was the outgrowth of "growth" management proposals offered by the Milk Producers Council of California (MPC)94 and the Holstein Association USA. In conjunction with NMPF's margin protection program, the organization has proposed a mandatory supply management program called the Dairy Margin Stabilization Program.

Costa-Sanders

The following summary for the Costa-Sanders bill was provided by the Congressional Research Service's report entitled, "Previewing Dairy Policy Options for the next Farm Bill."95

H.R. 5288 and S. 3531 would create a mandatory, nationwide program designed to manage the U.S. milk supply so that milk producers could avoid low and volatile farm milk prices.96 The program would attempt to stabilize farm milk prices by assessing producers who increase milk production over

94 Vandenheuvel, R. and S. Vander Dussen. "Dairy Price Stabilization Program." April 2010. Presentation to DIAC.

95 Shields, Dennis A. "Previewing Dairy Policy Options for the 2010 Farm Bill." July 2010. CRS Report R41141.

96 Office of Representative Jim Costa, "Rep. Costa Introduces Legislation to Strengthen Dairy Industry," press release, May 12, 2010, http://www.costa.house.gov/index.php?option=com_content&task=view&id=631&Itemid=82. Additional background information is available from the Milk Producers Council, at http://www.milkproducerscouncil.org; and from Holstein Association USA, Inc., at http://www.holsteinusa.com/pdf/DSPS/DPSP_plan_v18_01152010.pdf.

specified levels. Both the market access fee and the production growth rate would be determined based on market indicators. The program would operate alongside existing dairy programs, including marketing orders, price support, and the MILC program.97

Under H.R. 5288, each dairy producer would be assigned an initial base raw milk marketing quantity using the highest annual marketings among calendar years 2007, 2008, or 2009. The base would be adjusted to an "allowable milk marketings" amount for each farm, depending on the level of the national milk-feed price ratio (a measure of the farm milk price relative to feed costs), as specified in the bill [see Table 3 in Appendix]. Producers who sell more than their allowable milk marketing or expand their operations would pay a "market access fee" into a pool that would be redistributed to producers who do not exceed their allowable milk marketings. The program would not be a rigid quota system; producers could sell as much milk as they want, provided they pay any applicable fees. Producers could transfer (sell) their marketing base to another individual or entity that purchases the dairy facility.

Under H.R. 5288, the Secretary of Agriculture would consult with a 30-member board consisting of 24 dairy producers (with diverse geographic representation) and six other members, two each representing consumers, fluid milk bottlers, and dairy product manufacturers. (A dairy economist would be an adviser to the board.) Every three months the Secretary of Agriculture, in conjunction with the board, would announce the allowable annual growth in marketings (a national rate applied at the farm level) and the market access fee for excessive milk marketings. See Table 3 for the growth rate and fee schedule contained in the bill. Some discretion for deviating from the schedules would be allowed, but only if at least two-thirds of the board approves. Proponents expect that the growth rate and fee would be set at levels to exact the necessary change in milk production and prevent a sharp decline in farm milk prices.

S. 3531 is very similar to H.R. 5288. Importantly, the parameters for determining allowable milk marketings (production growth) and the fee schedule are the same. The major difference between H.R. 5288 and S. 3531 is that Senate bill mandates the supply management program, while H.R. 5288 requires

97 For background on dairy programs and pricing, see CRS Report R40205, *Dairy Market and Policy Issues*; and CRS Report R40903, *Dairy Pricing Issues*.

producer approval before its implementation. The remaining differences deal mostly with voting procedures, producer board composition, and establishing the initial marketing base.

Both bills require a producer referendum within three years to continue the program. Members are allowed to vote separately from their cooperative.

However, S. 3531 contains special provisions for two rounds of voting on the continuation. The first round requires producers to vote directly (i.e., no bloc voting). The second round allows coops to vote on behalf of producers who did not vote in the first round.

The producer board consists of only 15 members in S. 3531, compared with 30 in the House bill, but the proportions of producers and various representatives are the same in both bills. Also, the Secretary appoints the members in H.R. 5288, while dairy producers elect the board members in S. 3531.

When establishing the initial marketing base, the Senate bill differs from the House bill in two ways:

During the first quarter of program operation, S. 3531 contains provisions for producers to select either (1) the corresponding quarterly average of 2007, 2008, and 2009; or (2) the corresponding quarter of 2009. In contrast, H.R. 5288 uses the highest annual total among calendar years 2007, 2008 and 2009.

S. 3531 allows the Secretary to establish bases for producers who did not produce milk during 2007, 2008, and 2009. (The House bill has no provision for this; producers without a base would simply pay the access fee on all production.)

S. 3531 includes several additional factors for the Secretary to consider when deviating from the specified schedules for the allowable milk marketing growth rate and market access fee. The costs of feed, labor, and machinery, and other economic forces, are among the factors listed for consideration.

The program would be self-financed, with payments to producers funded by assessments on producers. Although existing dairy programs would continue to operate, the federal cost of DPPSP and MILC would likely be minimal if the new program effectively constrains excess milk production and keeps the farm milk price above the target price.

As for market impacts, a similar supply management plan was analyzed by Cornell University in 2009 using a detailed dynamic model of the U.S. dairy industry. The analysis found that the plan would increase farm milk prices and reduce farm price variability, but it would also reduce sales of dairy products and might decrease processors' revenues. 98 Under a situation whereby allowable milk marketings would be reduced (e.g., demand declines sharply and milk prices fall), the study indicated that farm prices would not drop as low as under regular market conditions and prices would recover more quickly, thus providing benefits across the dairy farm sector.

At the farm level, current dairy farmers who expanded in 2007, 2008, or 2009 could benefit more than other producers because the base calculation is determined by production in those years. New farmers or those wishing to expand production would be discouraged to the extent that (1) a market access fee is relatively high at the time, and/or (2) the cost of buying a milk base from another dairy producer is too high.

Potential dairy trade impacts include the possibility that the United States, assuming more stable prices, could become a more consistent supplier to the world dairy market. However, higher prices associated with the plan's effective implementation could reduce U.S. price competitiveness while potentially attracting more dairy imports.

National Milk Producers Federation Dairy Market Stabilization Program

The NMPF Dairy Market Stabilization program (DMSP) is intended to trigger supply reductions in time of low margins. During these low margin times, producers who ship more than their marketing base will receive a lower price for their milk. In supply management terms, this is akin to an assessment on producers for milk in excess of a base. The provisions of the proposal are summarized as follows (AFBF, 2010)[25]:

> *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:*

98 Nicholson, C. and Mark Stephenson. "An Analytical Review of a Growth Management Program for Dairy Producers." Cornell University. May 2009. p. 10.

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.

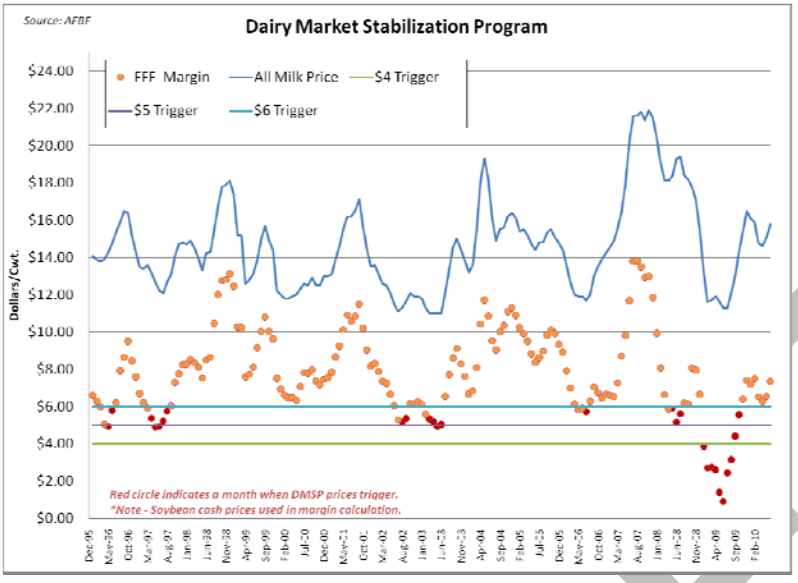
The base milk marketings will be a rolling three month average of the most recent milk marketings prior to the notification from USDA.

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 program is designed to trigger only when absolutely necessary. According to FAPRI and AFBF, the program would have triggered 25-27 times in the past 174 months – about 15 percent of the time.



Under the program, milk shipped by producers for which they are not paid will remain in the marketing chain. Processors will continue to pay for that milk, but that money will be retained by the federal order administrators. According to AFBF, sales of over-base milk will be indistinguishable from regular market sales. The money will be transferred to a board that will have discretion to spend the money.

NMPF has proposed using this money to fund supplemental feeding and nutrition assistance. AFBF's analysis determined that this program would have generated $70-75 million per year since 2000; however, that is an average that is greatly skewed to 2009 when 70 percent of those revenues would have been generated.

Bundled Analysis of FFTF

Both FAPRI and Nicholson/Stephenson analyzed FFTF as a collective package, including the replacement of price supports and MILC with margin insurance in combination with the market stabilization plan. Given the high level of interest in the FFTF proposal and the heavy reliance on the model conclusions, it is important to review both those conclusions and the model assumptions.

The "Key Results" from the Nicholson/Stephenson study99, edited to focus on FFTF, are:

- •The program would reduce milk price volatility significantly compared to the Baseline, both with and without shocks. Under the assumption of large shocks, the program would reduce the average absolute deviation from $1.75/cwt to $1.13/cwt.
- • Cumulative milk production from 2010□18 would be reduced by 0.4% to 0.5% (range with and without shocks).
- • The program would reduce government expenditures for dairy programs significantly. Under the assumption of large shocks, government expenditures would be reduced from about $3.2 billion over 2010□18 to $1.6 billion
- • The program would increase the average All-Milk price by $0.17/cwt without shocks, and by $0.06/cwt with shocks. These price enhancement effects occur because FFTF spends collected monies on demand enhancing activities (modeled as food donations through non-□commercial channels);
- • The programs would have different effects on net exports of American cheese, NDM and dry whey. Under the scenarios assuming the large shock, the FFTF would reduce average monthly net exports of American cheese by 22% compared to the Baseline. Net exports would continue to grow under the programs, just at a slower rate than under the Baseline. Moreover, the lower exports under FFTF would be offset to some degree by additional purchases for domestic markets. Average monthly dry whey exports would be reduced by 2.8%
- • The impact of the program on cumulative fluid sales during 2010-18 would be [a decline of] 0.4%. FFTF would reduce cumulative American cheese sales by 0.7%. Reductions in cumulative other cheese sales would be 0.3% for FFTF.
- • The programs would have different affects on Class III and IV prices. Due to purchases of American cheese, the FFTF program tends to enhance Class III prices compared to the Baseline (an average over 2010--□18 of $0.57/cwt for the scenario assuming large shocks. Average Class IV prices are lower under FFTF ($0.04/cwt) compared to the Baseline for the scenario assuming large shocks, which implies a larger average price spread between Class III and IV.

Nicholson/Stephenson concluded that FFTF would be effective in reducing both price volatility and government spending. It does have the potential to negatively impact net exports, but that could be somewhat compensated by DMSP product buy-up provisions under their assumptions.

As noted in their fourth bullet, the price enhancement generated by the model is related to the additional demand that is generated through purchases and donations of products with the money

99 Nicholson, C. and Mark Stephenson. "Analysis of Proposed Programs to Mitigate Price Volatility in the U.S. Dairy Industry." Cornell University. September 2010. Presented to DIAC.

collected from producers who market milk in excess of the targeted production under the program. The pool of funds that would be generated through this provision or the level of 'new' demand is not identified. Absent specific guidance in FFTF, they assumed that 80% of the fund would be allocated to cheese purchases and 20% would be allocated to dry milk purchases, resulting in the increase the model generates in Class III prices concurrent with the reduction in Class IV prices. These price impacts are based upon a complete market isolation assumption. They assume that no donations would displace commercial sales. This assumption warrants further review in the context of studies showing that government donations have historically resulted in some levels of commercial displacement.

They also attempt to model responsiveness of producers to the pay price reductions. In the baseline scenario, they assume a percentage of milk that would have otherwise been marketed without DMSP. Although Nicholson/Stephenson do not elaborate on the size of that milk volume, they state:

"We assume that a proportion of milk that was receiving the no-payment penalty when the program was triggered would continue to be marketed under the program. We assumed that 35 percent of the penalty milk would continue to be marketed, but that adjustments to milk production and marketing would also be made over time in response to reduced profitability.

Stephenson and Nicholson then run two scenarios that show producers being more responsive to the no-pay provisions. In the scenario where producers make a full and immediate permanent reduction in supplies when the penalties go into effect, the average All-Milk price is $0.31 higher than the baseline at $15.63/cwt and is $0.14 higher than the scenario assuming a 65% reduction in milk volumes in the penalty zone. Average deviation is reduced from $0.83 to $0.63/cwt but is higher than the $0.35 deviation shown in the 65% reduction scenario. Total milk marketed drops by 26 billion pounds. They note that the full and permanent immediate adjustment is unlikely. In the second scenario, they similarly assume a full and immediate permanent reduction in supplies when the penalties go into effect but they adjust the margin level that triggers the penalties from $6.00 to $4.95. That program sees the average All-Milk price reduction of $0.45 from the baseline to $14.87/cwt and decreases price deviation to $0.36/cwt. They note that this scenario results in similar price patterns to the $6 margin trigger with a 65% reduction in penalty marketings.

This issue of producer responsiveness is a key assumption. It would be helpful to see the model results if the production adjustments are less than the 65% reduction. This 65% assumption is worthy of

further consideration in the context of the historic experience with the various attempts to incent production adjustments in the U.S, such as the limited success of the various assessment schemes. The over-quota pricing ($1.70 discount) in California can be viewed as an 11% penalty at $15 quota milk prices and it has not stopped new dairies with zero quota from being built. A 65% reduction in penalty volume under FFTF when the maximum penalty is 8% and producers have an opportunity to build their base and avoid future penalties by continuing to market their full production through the period seems inconsistent with those experiences and warrants further discussion.

An additional assumption that needs to be better understood in the FFTF analysis is the nature of the reductions in marketings during the penalty periods in the 65% reduction scenario and the assumptions around marketings immediately after those penalty periods. Marketings rebounded quickly after the Dairy Diversion Program of the 1980s as noted earlier. Many producers under contract reduced marketings through adjusted feeding practices or on-farm milk diversions and were fully equipped to resume full marketing levels once they came out from under their contracts.

Although the questions around these assumptions may drive the discussion toward altering the FFTF parameters to be more binding, it is important to note the Nicholson and Stephenson response to the question "What are the risks of supply management programs? What are the possible unintended consequences? What are your key data points for cost-benefit analysis—what are the things to look at? You have done a lot of sensitivity analyses. What could go wrong? How do you calculate those probabilities?":

"The supply management programs, as crafted by various industry players, have been careful to attempt to only dampen price volatility with particular emphasis on not altering long-run average prices, maintaining a competitive position in export markets and not creating intangible assets in quota value. But the supply management components of any program provide tools that could be implemented more strongly to enhance prices and confound those goals."100

100 Nicholson, et al. "Responses to Additional Questions Requested by the Dairy Industry Advisory Committee" December 6, 2010.

Analysis by Dr. Scott Brown at University of Missouri's Food and Agricultural Policy Research Institute (FAPRI)[101] by Dr. Scott Brown concludes that the FFTF would help smooth out the peaks and troughs of milk prices:

"The program will in effect reduce high price periods that result after the loss of too many producers from the low margin period. Though demand shocks will still result in price volatility for the industry in the future, the FFTF program will moderate the range of producer margins that would be experienced without the program"

FAPRI concludes, "The DMSP feature of the FFTF program will provide another lever to help correct times of low margins. The FAPRI baseline has few observations that result in a triggering of the DMSP but in those periods of low margins, producers will be given a signal that supply adjustments need to occur. The base feature under DMSP will allow for industry expansion as needed to account for demand growth, since the base production level under DMSP is a rolling average of the three most current months." FAPRI's findings bring up an important question when analyzing any of the potential policy options: how responsive will producers be to the market and policy signals?

FAPRI's analysis includes both the Dairy Market Stabilization Program and the Dairy Producer Margin Protection Program. FAPRI's report acknowledges a relationship between the DPMPP and supply control program but does not elaborate on the extent that supply controls help reduce program spending. Additionally, few trade outcomes are presented. The analysis shows an increase in milk powder exports but does not detail trade changes in other product categories.

While the declines in price volatility are positive outcomes, troubling aspects of these results are net export declines in categories under this program. Export markets have significantly helped milk price recovery in 2010, as the U.S. is now exporting nearly 12 percent of all production on a solids basis.102

101 Brown, S. "Analysis of NMPF's Foundation for the Future Program." June 2010. FAPRI-MU Report #05-10

102 USDEC Estimate, Jan – Jul 2010.

Some believe that the Dairy Price Support Program has held the U.S. back from exporting products for decades. The fact that FFTF shows net export declines from current programs, including the DPPSP, could jeopardize the U.S. dairy industry's ability to become a consistent exporter.

Since both FAPRI and the Nicholson/Stephenson studies analyzed Foundation for the Future as a comprehensive program, it is difficult to discern which policy levers are actually driving the model changes – the margin protection program or the supply control program. Disaggregated analyses would be instructive to the committee.

Other Considerations Regarding Supply Management

The subcommittee identified the following potential concerns about supply management in its September report.

- Stifling investment in processing and manufacturing plants and new product development due to uncertainty of production levels.
- Potential to retard development of milk supplies in regions that are deficit, even if supply and demand conditions support development of additional milk supplies in that region.
- Potential that proposals will introduce increased volatility if intervention lags result in corrective action occurring concurrently with or subsequent to market correction.
- Devaluation of livestock by decreasing cattle demand due to reductions in expansion cattle market.
- Inhibiting the farmers' ability to manage risk by increasing production when needed.
- The potential of increasing imports and decreasing exports.
- The potential to incent market disruptive behaviors at the end of measurement periods, such as:
  - Dumping skim
  - Moving cows
  - Reduced marketings
- The unintended consequence of driving a race for the base mentality, incenting producers to increase production during periods in which penalties are not incurred.
- The potential that supply management inhibits growth of dairies to the scale necessary to address environmental and global competitiveness requirements.
- The potential that supply management may increase volatility by forcing greater uniformity in production decision-making than exists today.
- Taken as a whole, the subcommittee is concerned that supply management is 180 degrees in the opposite direction of the growth-driven strategies that most industries undertake to create a dynamic and thriving industry.

These remain issues that are worthy of further discussion.