Dairy Policy Proposals in the Next Farm Bill

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Summary

The 113th Congress has been considering an omnibus farm bill that would establish the direction of U.S. agricultural policy for the next five years. Among the many provisions being considered, both the Senate-passed (S. 954) and House-passed (H.R. 2642) versions of the 2013 farm bill would reshape the structure of U.S. dairy support.

Current U.S. federal dairy policy is based on five major programs—the Dairy Product Price Support Program (DPPSP), the Milk Income Loss Contract (MILC) Program, Federal Milk Marketing Orders (FMMOs), Dairy Import Tariff Rate Quotas (TRQs), and the Dairy Export Incentive Program (DEIP)—which together are designed to provide price and income support and market stability for dairy producers. In addition, several smaller programs aid the U.S. dairy sector with market promotion, research, price reporting, risk management, and disaster assistance.

In recent years, dairy producers have argued that a simple price-based system fails to reflect the sharp increases in milk production costs (particularly for corn used as feed) that have occurred since the mid-2000s. In response to producer concerns and to the volatile dairy price and margin developments of the past decade, both the Senate-passed (S. 954) and the House-passed (H.R. 2642) 2013 farm bills propose restructuring the traditional set of dairy programs by replacing DPPSP, MILC, and DEIP with a new income support program—a dairy margin insurance program—based on the monthly difference (i.e., the margin) between the national average farm all-milk price and a formula-derived estimate of feed costs. In addition, the Senate bill (unlike the House bill) includes a second program linked directly to margin insurance—the Dairy Market Stabilization Program (DMSP)—which, under certain conditions, would reduce payments to participating producers for their milk marketings, when the margin falls below proposed statutory thresholds, as an incentive to restrain growth in milk marketings during periods of low margins.

The House bill (unlike the Senate bill) also proposes to repeal permanent farm law (based on 1938 and 1949 legislation) and replace it with many of the farm programs in the current bill including the dairy margin insurance program. The differences between the House and Senate farm bills will have to be worked out in conference committee before a final farm bill can be voted on by both chambers of Congress.

If Congress is unable to successfully resolve the differences between the House and Senate versions of the farm bill, current programs would remain in effect until their expiration. The dairy product price support program (DPPSP) will expire on December 31, 2013. In the absence of new farm legislation, upon expiration of DPPSP, the dairy price support program would revert to "permanent law," whereby USDA would be compelled to purchase dairy products so as to support the all-milk price at 75% to 90% of a 1910-1914 parity price index. According to USDA, the all-milk parity price was $51.50 /cwt. in May 2013—75% of parity would set the USDA milk-equivalent product purchase price at $38.63/cwt. or nearly double the May average all-milk farm price of $19.70/cwt. A doubling of farm prices could lead to a substantial hike in retail prices as well.

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Introduction

Many of the farm commodity programs are set to expire with the extended 2008 farm bill (the Food, Conservation, and Energy Act of 2008, P.L. 110-246) in 2013. In anticipation, the 113th Congress has been considering an omnibus farm bill that would establish the direction of U.S. agricultural policy for the next five years.[1] On June 10, 2013, the full Senate approved its version of the bill (S. 954, the Agriculture Reform, Food and Jobs Act of 2013). On July 11, 2013, the House passed its version of the bill (H.R. 2642, the Federal Agriculture Reform and Risk Management Act of 2013).[2]

Both bills proposed replacing existing U.S. dairy price and income support programs with a new margin-based income support program. The Senate bill (but not the House bill) also includes an accompanying market stabilization program. During the House Agriculture Committee's markup of its first version of the 2013 farm bill (H.R. 1947) in May 2013, an amendment (H.Amdt. 228 to H.R. 1947) was introduced by Representatives Goodlatte and Scott that proposed removing the DMSP from H.R. 1947 and making some minor adjustments to DPMPP. The GSA was defeated by a vote of 28 to 26. However, the amendment was reintroduced during the House floor debate of H.R. 1947 and passed by a vote of 291-135 (May 15, 2013). The full House voted to reject the amended bill (195-234) on June 20, 2013. However, on July 11, 2013, the full House passed (216-208) a second version of the 2013 farm bill (H.R. 2642) that contained the Goodlatte-Scott amendment.

This report first briefly describes existing U.S. dairy programs. Then the dairy programs proposed in the 113th Congress's Senate- and House-passed farm bills are discussed and compared. Several examples of how the proposed dairy programs might operate for an individual dairy operation are provided in the text.

The report also includes Congressional Budget Office (CBO) cost projections of historical program outlays compared with the proposed new dairy programs under both bills, and a summary of academic analyses of potential market effects of the proposed dairy policies. Finally, the report includes an appendix that discusses disagreement over the market stabilization component of proposed new dairy policy and compares it with previous forms of supply management intervention in the U.S. dairy sector.

One-Year Farm Bill Extension

Many provisions of the 2008 farm bill were originally set to expire at the end of FY2012; however, the American Taxpayer Relief Act of 2012 (ATRA; P.L. 112-240)—signed into law by President Obama on January 2, 2013—extended the 2008 farm bill for one additional year, through FY2013, or, in the case of the farm commodity programs that are on a different calendar, through crop year 2013.[3] ATRA's passage avoided what news media and policymakers viewed as

[1] See CRS Report R42442, *Expiration and Extension of the 2008 Farm Bill* and CRS Report RS22131, *What Is the Farm Bill?*

[2] For a comparison of current U.S. dairy policy provisions with the two farm bill proposals—the Senate-passed S. 954 and the House-passed H.R. 2642—see CRS Report R43076, *The 2013 Farm Bill: A Comparison of the Senate-Passed (S. 954) and House-Passed (H.R. 2642, H.R. 3102) Bills with Current Law*.

[3] A crop year refers to the year in which a commodity is harvested. Thus, the extension will apply the farm commodity programs in the 2008 farm bill to covered commodities harvested in 2013.

a looming "fiscal cliff."[4] ATRA also extended the Milk Income Loss Contract (MILC) program through September 30, 2013, and the Dairy Product Price Support Program (DPPSP) through December 31, 2013.

In addition to avoiding a "fiscal cliff," the ATRA extension of the 2008 farm bill temporarily avoided a reversion to 1949 permanent law and the so-called "milk cliff."[5] Under permanent law, USDA would be compelled to purchase dairy products (milk and butterfat products) so as to support the all-milk price at 75% to 90% of a 1910-1914 parity price index. According to USDA, in May 2013 the all-milk parity price was $51.50 /cwt. At 75% of parity, the USDA milk-equivalent product purchase price of $38.63/cwt. would be nearly double the May average all-milk farm price of $19.70/cwt. A doubling of farm prices would likely lead to a substantial hike in retail prices, thus engendering the term "milk cliff." The potential reversion to permanent law, should current farm law expire without replacement or extension, is seen as an incentive for policymakers to produce new farm legislation, or at a minimum to extend current law.[6]

Current U.S. Dairy Policy

Current federal dairy policy is based on five major programs—the Dairy Product Price Support Program, the Milk Income Loss Contract Program, Federal Milk Marketing Orders, Dairy Import Tariff Rate Quotas, and the Dairy Export Incentive Program—which together are designed to provide price and income support and market stability for dairy producers.[7] In addition, several smaller programs aid the U.S. dairy sector with market promotion, research, price reporting, risk management, and disaster assistance.[8]

Dairy Product Price Support Program (DPPSP)

Established by federal law in 1949 and modified in subsequent legislation (most recently the 2008 farm bill, P.L. 110-246),[9] DPPSP indirectly supports the farm price of fluid milk at $9.90 per hundred pounds (i.e., hundredweight or cwt.) through government purchases of dairy products from dairy processors at statutorily set prices.[10] The program is countercyclical, in that

[4] CRS Report R42884, *The "Fiscal Cliff" and the American Taxpayer Relief Act of 2012*.

[5] For a discussion of the issues involved in reverting to 1949 Permanent Law, see CRS Report R42442, *Expiration and Extension of the 2008 Farm Bill*.

[6] During the House floor debate of H.R. 1947, Congressman Broun introduced an amendment (H.Amdt. 181 to H.R. 1947) to repeal the permanent price authority for milk; however, the amendment failed by a vote of 112-309. H.R. 2642, as passed by the House, would also repeal permanent farm law and replace it with the provisions of H.R. 2642.

[7] For greater discussion of the policy issues surrounding major U.S. dairy programs, see *Dairy Policy Issues for the 2012 Farm Bill*, Dairy Policy Analysis Alliance (DPAA), Univ. of Wisconsin and the Food and Agricultural Policy Research Institute (FAPRI), April 2010—hereinafter referred to as *Dairy Policy Issues for 2012 Farm Bill*, DPAA, April 2010—at http://www.fapri.missouri.edu/outreach/publications/2010/Dairy_Policy_Issues_April2010.pdf.

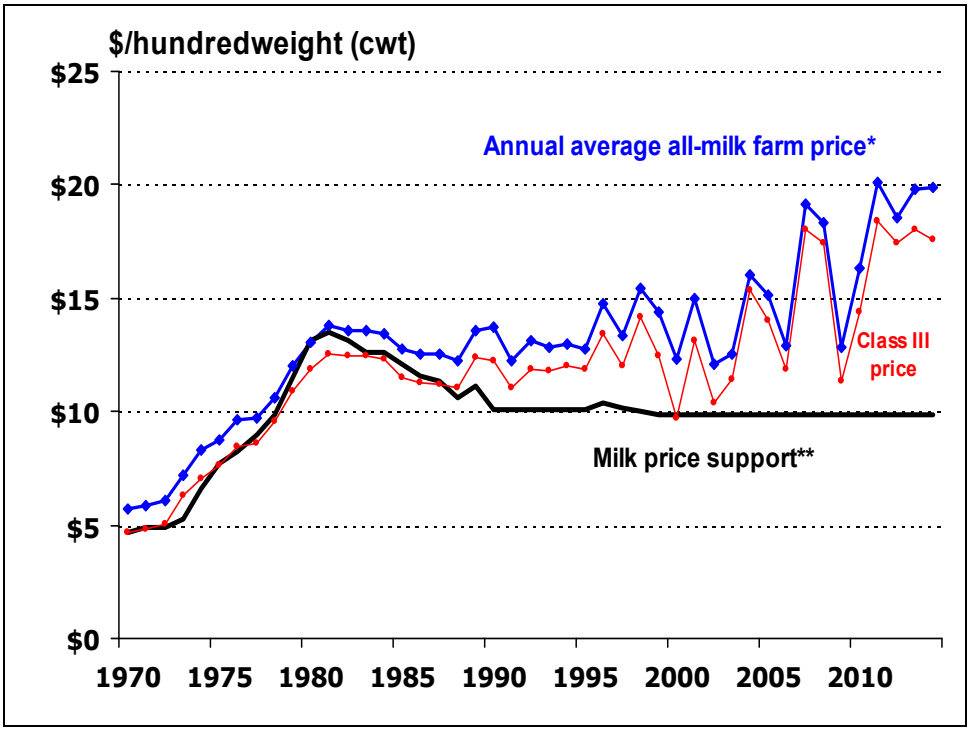
[8] For details of current U.S. dairy programs, including authorizing legislation and issues related to their implementation, see CRS Report RL34036, *Dairy Policy and the 2008 Farm Bill*.

[9] The US government purchased storable dairy commodities in 1933 and 1941 as a way to shore up farm milk prices and provide food for needy families. During WWII, the same mechanism was used to ensure adequate production. In the tumultuous economic aftermath of WWII, this means of supporting farm milk prices was made permanent through the Dairy Price Support Program of the Agricultural Act of 1949.

[10] The original program—named the Dairy Price Support Program—had a statutorily determined support price for fluid milk (e.g., $9.90 per cwt. in the mid-2000s). The program was renamed by the 2008 farm bill when direct fluid milk price support was shifted to indirect support via government purchases of manufactured products including butter, cheese, and milk powder at statutorily established prices. See the USDA DPPSP fact sheet at http://www.fsa.usda.gov/Internet/FSA_File/dppsp_en_fact_sheet.pdf.

government purchases occur when product prices are low, and cease as product prices rise above support levels. Also, when purchases exceed certain statutory levels, USDA is required to make temporary price adjustments (reductions) to avoid the accumulation of excess government inventories. The DPPSP expires December 31, 2013, and would be eliminated and replaced with new policy under both the Senate- and House-passed farm bills.

Figure 1. Milk Prices Have Moved Well Above Support Levels Since Late 1980s



Source: U.S. Dept. of Agriculture; *World Agricultural Supply and Demand Estimates (WASDE)*, September 12, 2013.

Notes: * National average price received by farmers, all milk, and the announced Class III price, are USDA data; 2013 and 2014 are USDA forecasts. ** The national price support for milk was statutorily established at $9.90 per cwt. from 1998 until 2008. Beginning in 2008, government purchase prices were established for individual dairy products, but with essentially the same effect as supporting raw milk at $9.90 per cwt.

Since the mid-1990s, the annual farm price of milk has trended higher, albeit subject to an increasingly volatile pattern (**Figure 1**), whereas the federal support rate has been flat at $9.90 per cwt. Volatile milk prices have made planning more difficult and have made dairy producers more vulnerable to unexpected or sustained increases in the cost of feed (the major cost component of dairy production). Analysts at the Dairy Policy Analysis Alliance (DPAA) have noted:

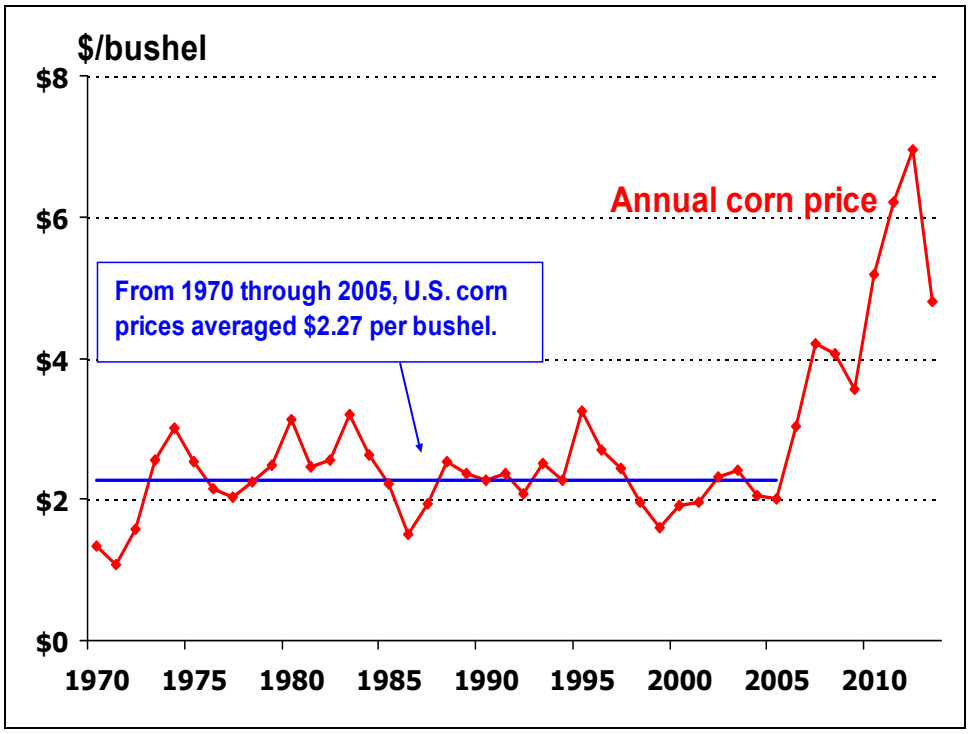
> The ability of price supports to maintain an effective price floor diminished as the support price was lowered and as dairy product manufacturers became increasingly reluctant to sell product to the government. In some cases, price supports have impeded U.S. dairy exports, distorted domestic markets, and constrained dairy product innovation.[11]

Milk producers have argued since the early 1990s that support levels have become too low, relative to market prices and costs of production, to provide meaningful support. More recently,

[11] *Dairy Policy Issues for 2012 Farm Bill*, Dairy Policy Analysis Alliance (DPAA), April 2010, p. 1.

milk producers contend that support based strictly on the price of milk fails to account for the sharp escalation of feed costs that has occurred since 2006 (**Figure 2**).

Figure 2. Feed Prices, Led by Corn, Have Risen Sharply Since 2006



Source: USDA, *WASDE*, September 12, 2013. The national average price received by farmers for corn for the 2012 marketing year is estimated by USDA at a record $6.95 per bushel.

Notes: Corn is the principal feed grain used in the United States. Prices for other feed grains and hay are closely correlated with the price of corn.

Since the emergence of the U.S. ethanol industry as a major source of corn demand in 2006, U.S. feed grain markets have surged to new price levels that are two to three times above the levels that persisted during the previous four decades. Rising feed costs are of particular concern to dairy producers because they represent a substantial portion of the cost of milk production—in 2011, feed costs accounted for 80% of operating costs and 54% of total costs of milk production (compared with 71% and 37% shares during the 2000-2004 period).[12]

Milk Income Loss Contract (MILC) Program

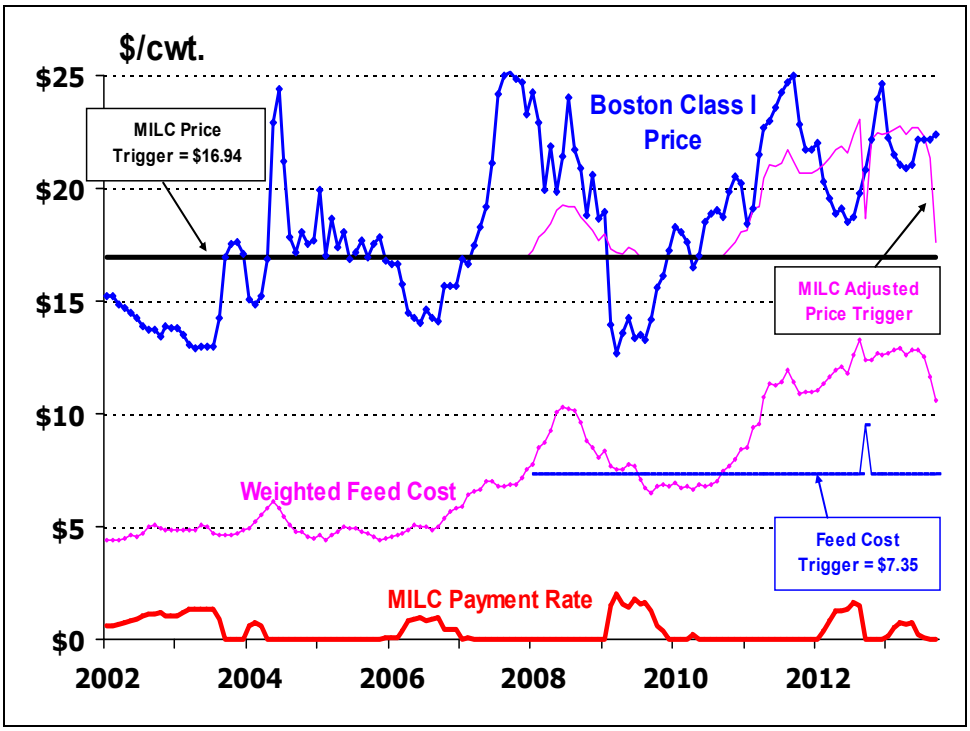
First established by the 2002 farm bill and reauthorized in 2008, MILC provides farm income support by giving participating dairy farmers nationwide a government payment whenever the farm price of milk used for fluid consumption (Class I) falls below a target price (adjusted for feed costs) for Class I farm milk sold to processors in the Boston market (**Figure 3**).[13] Under the 2002 program, all dairy producers participating in MILC were paid an amount per cwt. of milk

[12] USDA, Economic Research Service (ERS), Commodity Costs and Returns data, retrieved on July 23, 2012, from http://www.ers.usda.gov/data-products/milk-cost-of-production-estimates.aspx.

[13] See the USDA MILC fact sheet at http://www.fsa.usda.gov/Internet/FSA_File/milc2011.pdf.

production equal to 45% of the difference between the MILC target price of $16.94 and the lower market price.[14]

Figure 3. MILC Price and Payment Parameters Since 2002



Source: Northeast Marketing Area for Boston Class I price data, USDA for prices received by farmers for various feed components, latest update *Agricultural Prices*, September 27, 2013; margin calculations by CRS.

Notes: The MILC price trigger of $16.94/cwt. is adjusted upward by formula whenever a weighted feed-cost estimate exceeds $7.35/cwt. On September 1, 2012, the feed-cost trigger rose to $9.50/cwt. The feed-cost trigger was reset retroactively to $7.35/cwt. starting on October 1, 2012, by the American Taxpayer Relief Act of 2012 (ATRA), but will again rise to $9.50/cwt. on September 1, 2013, before expiring on September 30, 2013.

2008 Farm Bill Adds Feed-Cost Adjustment

Starting in 2008, an adjustment factor was added to the MILC target whenever a weighted formula of dairy feed costs exceeded an established threshold of $7.35/cwt. Thus, the per unit payment rate would rise with rising feed costs. MILC payments were made on the first 2.985 million lbs. of annual milk production per farm (equivalent to annual production from about 150 dairy cows). The MILC production limitation effectively limited MILC protection to about 30% of U.S. milk production.[15] As a result of this payment limitation, the MILC program has not been

[14] The MILC program initially expired on September 30, 2005, ahead of all other farm support programs in the 2002 farm bill. The Deficit Reduction Act of 2005 (P.L. 109-171) extended MILC for two years, through September 30, 2007, but dropped the payment rate to 34% through August 31, 2007, and to 0% for September 2007, so that it had no cost beyond the two-year extension. The 2008 farm bill reauthorized the program at 45% with the drop back to 34% in the last month (September 2012) to lower costs.

[15] *Foundation for the Future*, National Milk Producers Federation (NMPF), June 2010, p. 14.

popular among large dairy producers and has generated strong opposition from regions with predominantly larger herds.[16]

Most MILC payments occurred during the 2002 farm bill period (FY2002-FY2007) due to sustained low milk prices. In 2004, milk prices rose briefly, temporarily ending MILC payments, before restarting again in 2006. In 2007, milk prices rose sharply as part of a widespread commodity boom that lasted through most of 2008. In 2009 the U.S. dairy industry was especially hard hit by a combination of low milk prices and high feed costs that put exceptional financial pressure on many dairy producers and generated large MILC payments (**Table 7**). Milk prices recovered through 2010, but by early 2012, the incorporation of feed-cost adjustments driven by high corn prices pushed the MILC-adjusted price trigger above the price of Boston Class I milk, once again triggering MILC payments. From April through August 2012, MILC payments averaged nearly $1.40 per cwt.

MILC Parameters Adjusted Downward Prior to 2008 Farm Bill Expiration

On September 1, 2012, several MILC program parameters were lowered in advance of the program's original expiration date of September 30, 2012.[17] The altered MILC parameters resulted in the payment rate falling to zero for the month of September 2012. Had MILC continued to operate under the original parameters during September 2012, then the payment rate would have been approximately $0.59/cwt.

ATRA Extension Reset MILC Parameters

The ATRA extension of the 2008 farm bill both extended the MILC program through September 30, 2013, and reset the MILC program parameters to the pre-September 1, 2012, values that were in effect throughout the life of the 2008 farm bill up to that point. Furthermore, the MILC program parameter reset was made retroactive to September 30, 2012. Thus, MILC operated with the more restrictive program parameters (see footnote 17) only during the month of September 2012. MILC program parameters returned again to the more restrictive levels on September 1, 2013, such that MILC payments were subject to more stringent market conditions in order to be triggered after that point.

There is no net cost to the extension of the 2008 farm bill because funding to continue most of the major programs was already in the budget baseline, such as for the farm commodity, conservation, trade, and nutrition programs.[18] However, to extend MILC for one year at the higher support rate that existed in the 2008 farm bill before September 2012, an additional $110 million was needed, according to the Congressional Budget Office (CBO). The offset for this authority was a reduction of $110 million from a nutrition education program.[19]

MILC would be eliminated immediately under the 113th Congress's House-passed farm bill (H.R. 2642), whereas the Senate-passed farm bill proposes temporarily extend MILC (using the 45%

[16] *Dairy Policy Issues for 2012 Farm Bill*, DPAA, April 2010, p. 1.

[17] For purposes of limiting projected costs over the 10-year (FY2008-FY2017) baseline the 2008 farm bill reset the MILC payment parameters one month prior to the expiration of the 2008 farm bill. Starting on September 1, the MILC payment rate was lowered to 34% (down from 45%) of the difference between the feed-cost-adjusted price trigger and the lower market price, the feed cost threshold was raised from $7.35/cwt. to $9.50/cwt. and MILC payments were only to be made on the first 2.4 million lbs. of annual milk production, instead of 2.985 million lbs.

[18] CRS Report R42484, *Budget Issues Shaping a Farm Bill in 2013*.

[19] CBO score of H.R. 8, footnote "e," at http://cbo.gov/sites/default/files/cbofiles/attachments/American%20Taxpayer%20Relief%20Act.pdf.

payment factor rather than reverting to the 34% factor) for about nine months (through June 30, 2014, assuming that a farm bill was signed into law in September 2013) prior to its elimination.

Federal Milk Marketing Orders (FMMOs)

An FMMO is a geographically defined fluid milk marketing area. Established by federal law in the Agricultural Marketing Agreement Act of 1937, the FMMO system regulates milk marketing across state lines but within explicitly defined and geographically aligned multi-state regions.[20] Ten FMMOs are currently in operation today, down from a peak of 83 in 1962. Nine states have their own separate internal marketing orders that are state-regulated. FMMOs are designed to provide both price support and market stability for dairy producers. Producers delivering milk to FMMOs are affected by two fundamental FMMO provisions: classified pricing of milk according to end use, and pooling of receipts to pay all farmers within an FMMO a blended or weighted-average price.

Within each FMMO, dairy processors or handlers (i.e., milk buyers) are required to pay a minimum price for farm milk depending on its end use—for fluid consumption (Class I) or for manufactured products such as yogurt, ice cream, and sour cream (Class II), cheese and whey (Class III), and butter and powdered milk (Class IV). This is referred to as "classified pricing."

An end-product price formula uses the wholesale prices of storable dairy products (butter, cheddar cheese, whey, and powdered milk) to calculate the value of milk components—protein, butterfat, non-fat solids, and other solids. Another formula adjusts for processing costs (referred to as the make allowance) and for the yield of milk components in the end products. Finally, a constructed price for fluid milk (Class I) is derived that varies by zone. Within each FMMO, the value of all milk sales are "pooled" to generate a uniform average price—the blend price—paid to all dairy farmers that deliver milk within that FMMO. The farm price of approximately two-thirds of U.S. milk production is regulated under FMMOs.[21] State marketing orders account for approximately another 20% of milk production, such that very little milk in the United States escapes classified pricing and pooling, and there is substantial room for federal orders to expand if states elect to give up their control.

FMMOs are permanently authorized, and are therefore not subject to reauthorization in periodic omnibus farm bills. FMMOs are established and amended through a formal public hearing process that allows interested parties to present evidence regarding marketing and economic conditions in support of or in opposition to instituting or amending an order. Most changes are made administratively by USDA through the rulemaking process and approved by farmers in a referendum, although other legislation can address issues related to the FMMO system.

The Senate-passed S. 954 would require USDA to use a specified pre-hearing procedure to consider alternative formulas for Class III milk product pricing (Sec. 1462), and to analyze and report to Congress the potential effects of replacing the use of end-product price formulas with other pricing alternatives (Sec. 1481). In addition, S. 954 (Sec. 1476) would provide an option for the Federal Milk Marketing Order Review Commission—established by the 2008 farm bill (Sec. 1509) to conduct a comprehensive review and evaluation of FMMO and non-FMMO systems—to obtain funding from sources other than annual appropriations. In contrast, the

[20] For historical references on FMMO origins, see USDA, AMS, Dairy Programs, "Federal Milk Marketing Orders," listed under "Programs and Services" at http://www.ams.usda.gov/AMSv1.0/dairy.

[21] USDA, Agricultural Marketing Service, Milk Marketing Order Statistics, "Table 2—Measures of Growth in Federal Milk Order Markets, Years, 1947-2010" at http://www.ams.usda.gov/AMSv1.0/FederalMilkMarketingOrders.

House-passed H.R. 2642 includes a provision that would repeal the Federal Milk Marketing Order Review Commission.

Several Smaller Dairy Support Programs

Dairy Forward Pricing Program. Allows farmers to voluntarily enter into forward price contracts with milk handlers for pooled milk used for manufactured products (Classes II, III, and IV) under the FMMOs. The program allows regulated handlers to pay farmers in accordance with the terms of a forward contract instead of paying the minimum FMMO blend price for pooled milk. The prices paid by milk handlers under the contracts are deemed to satisfy the minimum price requirements of FMMOs. The program expired September 30, 2013, when the last contract can be signed, but would be extended under both H.R. 2642 and S. 954.[22]

Dairy Indemnity Payment Program (DIPP). Under DIPP, payments are made to dairy producers when a public regulatory agency directs them to remove their raw milk from the commercial market because it has been contaminated by pesticides, nuclear radiation or fallout, or toxic substances and chemical residues other than pesticides through no fault of their own. Payments also are made to manufacturers of dairy products, but only for products removed from the market because of pesticide contamination. DIPP expired September 30, 2013, but would be extended under both H.R. 2642 and S. 954.

Dairy Promotion and Research Program. A generic dairy product promotion, research, and nutrition education program, funded by a mandatory 15¢/cwt. assessment on milk produced and marketed in the 48 contiguous states. Importers in all 50 states, the District of Columbia, and Puerto Rico must also pay an assessment rate of 7.5¢/cwt. on imported products. USDA issues regulations on the time and method of importer payments. This program expired September 30, 2013, but would be extended under both H.R. 2642 and S. 954.

Fluid Milk Processor Promotion Program. Established by the 1990 farm bill (P.L. 101-624), with subsequent reauthorizations, the national Fluid Milk Processor Promotion Program develops and finances generic advertising programs designed to maintain and expand markets and uses for fluid milk products produced in the contiguous 48 states and the District of Columbia. The program is funded through a 20¢/cwt. assessment on all milk processed for fluid consumption. The fluid milk order was approved by a referendum among fluid milk processors and became effective December 10, 1993. The program originally required periodic congressional reauthorization; however, the 2002 farm bill gave it permanent authority.

Dairy Product Mandatory Reporting Program. Requires manufacturers to report to USDA the price, quantity, and moisture content of dairy products sold. Quarterly audits are to be undertaken to ensure compatibility between submitted information and related dairy market statistics. S. 954 would increase the reporting frequency while H.R. 2642 would leave the program as is.

Livestock Gross Margin (LGM) Insurance for Dairy. A pilot program available for purchase from private insurers through USDA's permanently authorized federal crop insurance program. LGM provides protection to dairy producers when feed costs rise or milk prices drop. Gross margin is the market value of milk minus feed costs. LGM Dairy uses futures prices for corn, soybean meal, and milk to determine the expected gross margin and the actual gross margin. Under S. 954, participation in the proposed dairy margin program (see below) makes a dairy producer ineligible for LGM. In contrast, H.R. 2642 is silent in regards to the LGM program.

Sources: USDA's dairy programs home page at http://www.ams.usda.gov/AMSv1.0/DairyLandingPage; USDA DIPP fact sheet at http://www.fsa.usda.gov/Internet/FSA_File/dipp10.pdf; USDA LGM Dairy fact sheet at http://www.rma.usda.gov/pubs/rme/lgmdairy.pdf.

Dairy Export Incentive Program (DEIP)

Established by the 1985 farm bill with subsequent reauthorizations, DEIP subsidizes dairy product exports by providing per-unit cash payments to exporters.[23] The subsidy helps higher-

[22] Cooperatives can evade minimum blend price requirements and pay on forward contract without this rule. The exemption provided by this program allows proprietary and investor-owned manufacturers to offer the same kind of forward contracting option to their direct supply farmers—who do not belong to a cooperative. This program only applies to milk used in manufacturing, not Class I; fluid milk processors are still obligated to pay Class I prices.

[23] See USDA, Foreign Agricultural Service (FAS), DEIP, at http://www.fas.usda.gov/excredits/deip/deip-new.asp.

priced U.S. dairy products compete in international markets. As a result, DEIP provides support through enhanced export competitiveness. Originally intended to counter foreign (mostly the European Union) dairy subsidies, DEIP has been rarely used in recent years as the use of dairy export subsidies has declined globally. DEIP (as extended by ARTA) expires on December 31, 2013. DEIP would be eliminated immediately under both the Senate-passed (S. 954) and House-passed (H.R. 2642) farm bills of the 113th Congress.

Dairy Import Tariff Rate Quotas (TRQs)

TRQs protect higher-priced domestic dairy products by limiting the importation of lower-priced foreign dairy products.[24] A quota level is established for selected dairy products such that under-quota import volumes enter the United States at a zero or reduced duty, whereas above-quota volumes are charged a prohibitive duty. By limiting competition, TRQs provide price support to the domestic dairy industry while protecting less efficient operations and raising consumer prices. DPAA states:

> U.S. dairy trade policy does not directly affect milk prices in the same way as marketing orders or the MILC program, but trade policy does influence the competitive environment for U.S. exports and imports of dairy products. Greater exposure to world markets has brought an added element of milk price instability to U.S. dairy markets. At the same time, foreign demand for dairy products is expanding more rapidly than U.S. demand, offering growth in U.S. milk production.[25]

Dairy TRQs are unaffected by proposed changes to the farm bill.

New Dairy Policy Proposed in the Next Farm Bill

In the 113th Congress, both the Senate-passed (S. 954) and House-passed (H.R. 2642) 2013 farm bills propose restructuring the traditional set of dairy programs by replacing DPPSP, MILC, and DEIP with a new margin insurance program—called the **Dairy Production Margin Protection Program (DPMPP)** under S. 954, and the **Dairy Producer Margin Insurance Program (DPMIP)** under H.R. 2642. The margin insurance program would operate as an income support program based on the monthly difference (i.e., the margin) between the national average farm all-milk price and a formula-derived estimate of feed costs. The Senate-passed S. 954 would link DPMPP with the **Dairy Market Stabilization Program (DMSP)**, which, under certain conditions, would reduce payments to participating producers for their milk marketings when the margin falls below proposed statutory thresholds.

Early versions of the House 2013 farm bill also included the DMSP as part of new dairy policy. During the House Agriculture Committee's markup of its first version of the 2013 farm bill (H.R. 1947) in May 2013, an amendment (H.Amdt. 228) was introduced by Representatives Goodlatte and Scott that proposed removing the DMSP from H.R. 1947 and making some minor adjustments to DPMPP. The GSA was defeated by a vote of 28 to 26. The amendment was reintroduced during the House floor debate of H.R. 1947 and passed by a vote of 291-135 (May 15, 2013). However, the full House voted to reject the amended bill (195-234) on June 20, 2013. On July 11, 2013, the full House passed (by a vote of 216-208) a second version of the 2013 farm bill (H.R. 2642) which included the Goodlatte-Scott amendment—thus removing DMSP and replacing DPMPP with DPMIP.

[24] For details by product, see the Harmonized Tariff Schedule of the United States (2012) (rev. 2), Chapter 4, pp. 2-7.

[25] *Dairy Policy Issues for 2012 Farm Bill*, DPAA, April 2010, p. 2.

Origins of the Proposed New Dairy Policy

The new dairy margin and stabilization programs originated with a proposal published in June 2010 by the National Milk Producers Federation (NMPF) called the *Foundation for the Future (FTF)*.[26] A version of FTF was introduced in the 112th Congress as H.R. 3062, The Dairy Security Act (DSA), by House Agriculture Committee Ranking Member Collin Peterson on September 23, 2011. A modified version of DSA appeared as "Subtitle D—Dairy," in Title I of both the House-reported (H.R. 6083) and Senate-passed (S. 3240) farm bills of the 112th Congress.

Note to Readers

Proposed changes to current U.S. dairy policy as well as the main differences among the Senate-passed S. 954 and the House-passed H.R. 2642 are described below.[27] Both bills assume that a final farm bill will pass at some point prior to the expiration of the extended 2008 farm bill on September 30, 2013. Although both of these bills provide important structure and direction concerning the application of the new programs, substantial detail would need to be worked out by USDA in order to implement the new programs. As a result, this report is "preliminary" in the sense that neither the next farm bill nor the USDA implementing regulations have yet been developed. Instead, this report relies on the program details of S. 954 and H.R. 2642, supplemented by several related studies and reports produced by prominent U.S. dairy economists and market experts on how the new margin protection and market stabilization programs are expected to function, so as to produce a preliminary description of the main features of the proposed new dairy programs.[28]

Current Dairy Programs That Are Eliminated or Retained

The current price-based **Dairy Product Price Support Program (DPPSP)** and **Milk Income Loss Contract (MILC)** programs, as well as the **Dairy Export Incentive Program (DEIP)**, are eliminated under S. 954 and H.R. 2642. The elimination of DPPSP and DEIP would be effective October 1, 2013. MILC is eliminated immediately under H.R. 2642, but is extended through June 30, 2014, under S. 954 to provide income support for a transitional period of time while dairy producers, who might otherwise be hesitant to switch to the new programs, have extra time to better understand and evaluate them.

The S. 954 extension of MILC would be done using the MILC program parameters that were in place through August 31, 2013 (see "ATRA Extension Reset MILC Parameters" for details.). If, at any time during the MILC interim period (the first nine months following enactment), a producer opts for margin protection (DPMPP) in lieu of MILC, the decision is irrevocable. Also, if dairy producers sign up for DPMPP, they become ineligible for the Livestock Gross Margin (LGM) Insurance for Dairy program under S. 954 (Sec. 1412(f)).

The **Dairy Forward Pricing**, **Dairy Indemnity**, and **Dairy Promotion and Research Programs** are extended through the next farm bill period until September 30, 2018, by both bills. S. 954 also requires increased reporting frequency (to at least a monthly basis) for wholesale dairy product prices or commercial stocks of bulk dairy commodities or any product information that may

[26] See the NMPF Foundation for the Future website at http://www.futurefordairy.com/.

[27] For an overview of the originally proposed dairy programs, see "Dairy Provisions of the Senate Agriculture Reform, Food, and Jobs Act of 2012," PDMP Information Letter 12-03, by Andrew Novakovic and Mark Stephenson, April 2012; hereafter referred to as "Dairy Provisions of ARFJA," Novakovic and Stephenson, April 2012.

[28] Citations and references are used to signify source material.

"significantly aid price discovery" under the **Dairy Product Mandatory Reporting** provisions of current law.

Federal Milk Marketing Orders (FMMOs), which exist under permanent authority, are left unchanged by H.R. 2642. In contrast, S. 954 recommends two minor adjustments—first, to establish a specified pre-hearing procedure to consider alternate formulas for Class III milk product pricing, and second, to require USDA to analyze the effects of replacing the use of end-product price formulas with other milk pricing alternatives. In regards to the **Federal Milk Marketing Order Review Commission**—established by the 2008 farm bill [Sec. 1509] to conduct a comprehensive review and evaluation of FMMO and non-FMMO systems—S. 954 (Sec. 1476) would provide an option to obtain funding from sources other than annual appropriations. In contrast, H.R. 2642 would repeal the Federal Milk Marketing Order Review Commission.

Dairy Margin Insurance

The newly proposed margin insurance program would provide milk producers with protection from low operating margins in place of the DPPSP and MILC programs. Unlike the MILC program, margin insurance would not have an explicit cap related to size of operation—that is, there is no production or dollar payment limitation associated with the dairy margin program. Instead, margin insurance payments would be limited by how much of a producer's historical and/or current milk production is covered—an election made by the producer. A producer's decision to participate in margin insurance is voluntary; however, under S. 954 once a producer elects to participate, he is also electing (by mandate) to subject his dairy operation to the rules of the Dairy Market Stabilization Program (DMSP). H.R. 2642 would void this obligation by eliminating the DMSP.

A key aspect of the proposed margin insurance program is creating a timely and transparent measure of a dairy production margin that will be useful across all dairy production regions. The margin insurance program proposes using USDA-reported monthly national average price data for all classes of milk (the all-milk price) and the cost of three feeds that represent the bulk of purchased feeds in dairy rations (corn, soybean meal, and alfalfa hay) to construct an estimate of the margin between the price for 100 pounds (i.e., a hundredweight or cwt.) of milk produced and the cost of an average feed ration used to produce a hundredweight of milk (see box below).

This formulation is used, in part, because the data are both transparent and readily available at the national level, thus facilitating its routine and timely calculation, and also because feed costs are traditionally the most variable component of dairy production operating margins. It is noteworthy that important milk production costs are necessarily excluded from this formula, including labor, utilities, depreciation, capital, veterinary services, and nutritional supplements. Thus, this operating margin formula is a crude indicator of dairy profitability. The excluded operating cost items vary greatly across individual operations and will likely be addressed by individual producers when determining their desired level of margin coverage.

Operating "Margin" = Milk Returns over Feed Costs

The operating margin is defined as the difference between the average national "all-milk" farm price and an average, formula-derived monthly value for the cost of a representative dairy feed ration.[29]

Margin per cwt. = (All-Milk Price per cwt.) – (Feed Cost per cwt.)

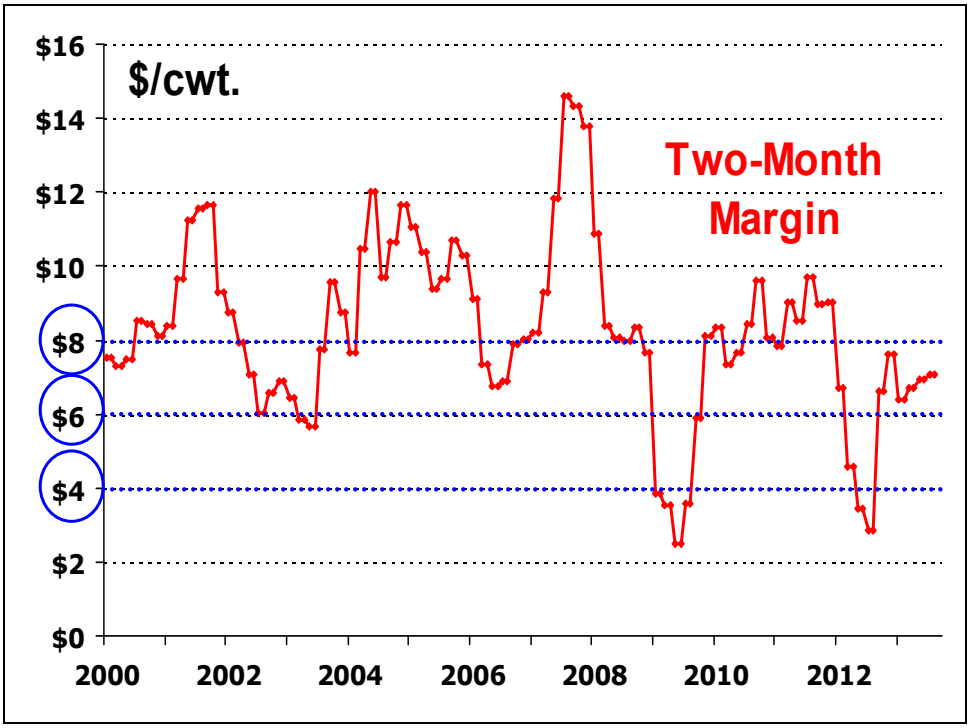
Weighted Feed Cost Formula

The national average price paid for feed used by a dairy operation to produce a cwt. of milk is based on price data for the three major feed ingredients—corn, soybean meal, and alfalfa hay. Monthly price data for these three feedstuffs are combined into a weighted feed cost estimate per cwt. of milk production using the following formula.[30]

Feed Cost per cwt. = (1.0728 x corn price) + (0.00735 x soybean meal price) + (0.0137 x alfalfa hay price)

where the corn price is in $/bushel and the soybean meal and alfalfa hay prices are in $/ton.

Figure 4. The Dairy Operating Margin: (All-Milk Price) Minus (Average Feed Cost)



Source: Margin (national average all-milk price minus average cost of feed ration) calculated by CRS using USDA data (*Agricultural Prices*, September 27, 2013) and based on the two-month periods: Jan.-Feb., Mar.-Apr., May-June, July-Aug., Sept.-Oct., and Nov.-Dec.

Effective Date and Implementation Specifics

Under both bills, October 1, 2013, is the effective date whereby the provisions of the new dairy program would take effect—assuming that a final identical version of the next farm bill passes

[29] Monthly prices received by farmers for all-milk, corn, and alfalfa hay are published monthly in *Agricultural Prices*, National Agricultural Statistics Service (NASS), USDA. The average wholesale price for soybean meal, Central Illinois, is reported in *Market News,* Agricultural Market Service (AMS), USDA.

[30] For a detailed description of the feed cost formula derivation, see *Foundation for the Future*, NMPF, June 2010, pp. 16-19; at http://www.futurefordairy.com/.

both the House and Senate, and is signed into law by the President. Under both S. 954 and H.R. 2642, 30 days after the farm bill has become effective, USDA must announce the establishment and availability of a DPMPP program.[31]

According to S. 954, 120 days after the act has been signed into law, the DPMPP program must be implemented. However, S. 954 exempts DPMPP and DMSP from standard rulemaking procedures. H.R. 2642 (Sec. 1402), via an amendment adopted by the House Judiciary Committee, removes this exemption and authorizes (but does not require) USDA to issue interim rules for the dairy producer margin insurance program (DPMIP). Final rules are to be published for DPMIP within 21 months of enactment.

Signing Up for Margin Insurance

All U.S. dairy producers are eligible to participate in the margin protection program. USDA will announce a registration (or signup) period in the *Federal Register* including the manner and form of registration (or signup). Under the Senate-passed S. 954, producers make a one-time election to participate and must register with USDA within the 15-month period beginning on the initiation date of the USDA-announced registration period.[32] In contrast, H.R. 2642 states that dairy producers seeking to participate in dairy margin insurance have a one-year period from the initiation date of the signup period to opt in or out, and annually thereafter. Both dairy proposals—S. 954 and H.R. 2642—have provisions for new entrants and procedures for transferring eligibility and participation upon sales of a dairy. There are also provisions for owners of multiple operations and multiple owners of one operation.[33]

Under S. 954, DPMPP offers two margin protection plans: Basic Margin Protection (BMP) and Supplemental Margin Protection (SMP). BMP is a fully subsidized program,[34] subject to an annual fee, that insures at a single $4.00/cwt. margin. In contrast, SMP is a partially subsidized program, subject to annual premiums, that offers additional margin protection coverage in $0.50/cwt. increments from $4.50/cwt. to $8.00/cwt. See **Figure 4** for a depiction of how often the monthly margin would have fallen below the $8.00/cwt., $6.00/cwt., and $4.00/cwt. thresholds in recent years.

Margin protection coverage is cumulative—a dairy operator must first sign up for BMP before participating in SMP. The decision to participate in BMP is a one-time choice and lasts for the duration of the next farm bill through September 30, 2018. The decision to participate in the higher coverage levels of SMP is made on an annual basis (beginning with the initial signup) whereby a producer may opt in or out of SMP in any given year irrespective of previous SMP participation.

An annual administrative fee is charged for participation in BMP (**Table 1**) based on the dairy producer's volume of milk marketed during the previous calendar year. The annual administrative fee for BMP is paid at registration (or signup). Under S. 954, DPMPP would end on December 31, 2018.

[31] USDA is required to publish a notice in the *Federal Register*, to inform dairy producers and other stakeholders of the availability of the new programs.

[32] S. 3240, Section 1412(c)(1).

[33] "Dairy Provisions of ARFJA," Novakovic and Stephenson, April 2012, p. 6.

[34] Unlike conventional crop insurance, there is no calculation of an actuarially fair "premium" for the margin insurance program; nor is there private distribution and servicing of crop insurance accounts. Hence, the degree of subsidization is not defined or controlled *ex ante*. Nevertheless, it is universally expected that indemnity payments will likely exceed premiums over a span of years. This is less certain at the highest coverage levels.

Milk Production Coverage Under Margin Protection

Each of the margin protection programs—BMP and SMP under S. 954, and MP under H.R. 2642—has different costs, makes payments based on different milk production histories, and has different limits on how much of a producer's milk production is covered by the margin insurance program.[35]

The Relevant Milk Production History

Production histories are calculated differently under S. 954 and H.R. 2642.

Under BMP of S. 954, all participants receive the same coverage rate of 80% of *Basic Production History (BPH)*. For dairy operators who have a complete history of dairy operations, BPH is defined as the highest annual milk marketings during any of the three years preceding the calendar year in which the participating dairy operation first signed up for BMP. Special procedures are defined for determining BPH for new entrants and operators with incomplete data. The BPH remains fixed for the duration of the next farm bill.

Under SMP of S. 954, each producer elects a coverage level of between 25% and 90% of the *Annual Production History (APH)*. APH is equal to the actual milk marketings during the preceding calendar year. Unlike the BPH, which is fixed, the APH may vary from year to year over the duration of the next farm bill. As a result, APH allows for margin protection to be extended to any growth in annual dairy production that occurs during the farm bill period.

Because it is unlikely that BPH will equal APH, it will generally be true that participating dairy operators will get paid on different amounts of milk under the two programs—BMP and SMP.

Under H.R. 2642, each producer elects a coverage level of between 25% and 80% of a single, annually-updated *Production History (PH)*. PH is equal to the highest annual milk marketings during any of the three years preceding each calendar year of registration. Unlike the BPH, which is fixed, the PH is similar to APH in that it may vary from year to year over the duration of the next farm bill. As a result, PH also allows for margin protection to be extended to any growth in annual dairy production that occurs during the farm bill period.

Two-Month Period Average Margins

Margin payments are triggered and calculated the same under both proposals—S. 954 and H.R. 2642.

For purposes of determining both whether a margin insurance payment is triggered and, if so, the amount of the payment, average margins are calculated for specific two-month periods. Each calendar year is broken into the following two-month periods: January-February, March-April, May-June, July-August, September-October, and November-December.

Note that a low single-month average margin does not trigger a margin insurance payment if the two-month average is above the trigger. For example, assume a producer has selected a $6.00 margin threshold (described below). Then a January margin of $5.80 followed by a February margin of $6.30 produces a two-month average of $6.05, which would fail to trigger the margin threshold.

Under S. 954, USDA is instructed to determine a margin as soon as possible after the necessary prices are reported. NASS full-month price estimates—not preliminary estimates—must be used for both months in calculating the two-month average. As a result, the two-month average margin calculation will not be available until a full month after the two-month period has expired. H.R. 2642 is silent on both the timing of payments and which NASS price estimates (partial- or full-month) to use in calculating the margin.

One-Month Period Average Margins

Average margins are calculated for one-month periods for purposes of evaluating whether a Dairy Margin Stabilization Program (DMSP) threshold has been triggered. H.R. 2642 omits all provisions related to the DMSP.

[35] Milk production is seasonal, with swings from high to low varying across herds by both magnitude and timing. This means that actual, two-month milk production on herds is not a clean one-sixth of annual production. As a result, under the base allocation method it could be common for farms to find that the amount of milk they can cover with insurance will only approximately correlate to 80% of a base under BMP or the selected coverage level under SMP.

Table 1. Annual Administrative Fee for Basic Margin Protection

If previous calendar year milk marketings (lbs.) are:		S. 954	H.R. 2642
< 1 million lbs.		$100	$0
> 1 million lbs. but	< 5 million lbs.	$250	$0
> 5 million lbs. but	< 10 million lbs.	$350	$0
> 10 million lbs. but	< 40 million lbs.	$1,000	$0
> 40 million lbs.		$2,500	$0

Source: ARFJA (S. 954), Section 1412(e)(2); and FARRM (H.R. 2642) of the 113th Congress.

Under H.R. 2642, there is a single voluntary, partially subsidized margin protection (MP) program subject to annual premiums, that offers margin protection coverage ranging from $4.00/cwt. to $8.00/cwt. in $0.50/cwt. increments. Dairy producers may, on an annual basis, change their coverage level or opt out entirely. There is no annual registration fee and coverage at the $4.00/cwt. margin is free for the first 4 million pounds of milk production. Finally, there is no expiration for the dairy margin insurance program under H.R. 2642.

Retroactive Sign Up

H.R. 2642 stipulates that within 30 days after the "effective" date of the farm bill, USDA must publish a notice in the *Federal Register* (FR) of the availability of "retroactive" margin protection covering the period from the "effective" date of the farm bill until initiation of the signup for margin protection. Under this provision a producer may notify intent to participate prior to the initiation of sign up and receive coverage for that additional period. But to comply, producer signup must occur within 150 days of the USDA FR announcement. S. 954 has no provision for retroactive signup.[36]

S. 954 Basic Margin Protection (BMP)

Basic Margin Protection (BMP) can be thought of as providing protection from catastrophic losses due to low margins. Under BMP, whenever the average operating margin falls below $4.00 per cwt. during a two-month period, then a government payment equal to the difference between $4.00 and the actual margin (up to a maximum per cwt. payment of $4.00) is triggered.[37]

BMP Payment Rate per cwt. = the lesser of ($4.00 – actual margin) or $4.00

To determine the BMP payment for the specific two-month period in which a positive BMP payment rate occurs, the BMP payment rate is applied to the lesser of 80% of the BPH prorated to a two-month period (i.e., BPH divided by six), or the actual quantity of milk marketed during the two-month period.[38]

BMP Payment = (BMP Payment Rate) * Lesser of 80% of (BPH/6) or (actual 2-month milk production)

[36] However, S. 954 does include the extended MILC program as an alternative through June 30, 2013.

[37] The $4.00/cwt. cap on the BMP payment rate excludes negative margins where feed costs exceed the all-milk price.

[38] See footnote 35.

BMP payments will continue as long as the average margin is less than $4.00/cwt. for each successive two-month period. BMP payments cease when the average margin reaches or exceeds $4.00/cwt. during any two-month period.

S. 954 Supplemental Margin Protection (SMP)

Supplemental Margin Protection (SMP) can be thought of as providing protection from sustained low operating margins but at levels above the $4.00/cwt. catastrophic level of BMP. Under SMP, dairy producers already participating in BMP can elect to buy additional margin protection each year in $0.50/cwt. increments from $4.50 up to $8.00 per cwt. The decision to participate in SMP is a voluntary choice made annually. This is in contrast to BM P participation, which involves a commitment for the lifetime of the 2013 farm bill.

In addition to selecting an *SMP margin threshold* ranging from $4.50/cwt. to $8.00/cwt., the producer must elect a *coverage percentage* of between 25% to 90%. The coverage percentage determines the portion of the farm's milk production that will receive an SMP payment. As mentioned earlier, under SMP, the relevant measure of historical milk production is referred to as the annual production history (APH) and is equivalent to the previous year's milk production. The coverage level is also a key determinant in calculating the premium to be paid for supplemental margin protection.

Whenever the operating margin falls below the selected *SMP margin threshold* for a consecutive two-month period, a payment will be made on a portion of a participating producer's APH. The *SMP payment rate per cwt.* is equal to the difference between the selected *SMP threshold* and the greater of the actual margin or $4.00.

SMP Payment Rate per cwt. = (Selected SMP Threshold) – greater of (actual margin) or $4.00

The historical frequency of these margin levels (**Table 2**) provides information concerning the likelihood of future payments at different margin levels. Using margin estimates for the two-month periods since January 2000, the monthly margin has been below $4/cwt. in 7.3% of the months and above $8/cwt. in nearly 55% of the months. Margins within the $6/cwt. to $8/cwt. range occurred in nearly one-third of the months.

Table 2. Margin Distribution, January 2000 through September 2013

Margin Range	Number of Months	Share (%)
Margin < $4.00	12	7.3%
$4.00 ≤ Margin < $6.00	8	4.9%
$6.00 ≤ Margin < $8.00	54	32.9%
Margin > $8.00	90	54.9%
Total	**164**	**100%**

Source: CRS calculations using USDA data and based on the two-month period margins (Jan.-Feb., Mar.-Apr., May-June, July-Aug., Sept.-Oct., and Nov.-Dec.) as described in the box entitled, "Milk Production Coverage Under Margin Protection." See **Figure 4** for a visual display of the margin calculations.

Notes: Margin per cwt. = (All-Milk Price per cwt.) – (Feed Cost per cwt.)

To determine the *SMP payment*, the SMP payment rate times the coverage percent is applied to the lesser of either the *APH* for which a producer contracted, but prorated to a two-month period (i.e., APH divided by six), or the actual quantity of milk marketed during the two-month period.

SMP Payment = (SMP Paymt. Rate) * (Coverage %) * lesser of (APH/6) or (actual 2-mo. milk prod.)

SMP payments will continue as long as the margin is less than the selected SMP margin threshold for consecutive two-month periods. SMP payments cease when the margin reaches or exceeds the selected SMP margin threshold for a two-month period.

H.R. 2642 Margin Protection (MP)

H.R. 2642 offers a single margin protection program with elective coverage ranging from $4.00/cwt. to $8.00/cwt. in $0.50/cwt. increments. Important distinctions from S. 954 are that H.R. 2642 eliminates the initial registration fee and does not cap margin protection at a $4.00/cwt. margin payment for the minimum $4.00/cwt. margin protection level. As a result, in the event that the cost of a dairy feed ration, per hundredweight of milk, was to exceed the average all-milk price and result in a negative margin, then the margin payment would incorporate that excess. This feature enhances margin protection; however, it also increases government exposure to higher program outlays. In contrast, S. 954 excludes negative margins from margin payment calculations.[39]

Whenever the operating margin falls below the selected *MP margin threshold* for a consecutive two-month period, a payment will be made to an elective portion (i.e., the coverage percentage of between 25% and 80%) of a participating producer's production history (PH). The *MP payment rate per cwt.* is equal to the difference between the selected *MP threshold* and the actual margin.

MP Payment Rate per cwt. = (Selected Threshold) – (actual margin)

To determine the *MP payment*, the MP payment rate times the coverage percentage is applied to the lesser of either the *PH* for which a producer contracted, but prorated to a two-month period (i.e., PH divided by six), or the actual quantity of milk marketed during the two-month period.

MP Payment = (MP Payment Rate) * (Coverage %) * lesser: (PH/6) or (actual 2-mo. milk prod.)

As under S. 954, margin payments will continue as long as the margin is less than the selected margin threshold for consecutive two-month periods. Payments cease when the margin reaches or exceeds the selected margin threshold for a two-month period.

Special Note on Margin Payments

Neither bill specifies a particular timetable for a margin payment, but it is reasonable to expect that payment would be as soon as practicable. Since all payments are based on data that are

[39] Based on CRS calculations, the lowest two-month margin since January 2000 was $2.49/cwt., which occurred during the May-June period of 2009. Thus, the evidence suggests that a negative margin occurrence is highly remote.

collected before a payment action is announced (i.e., coverage level and base marketings), USDA would not have to wait for any new data or action on the part of a producer.[40]

Example of BMP and SMP Payment Calculations

Suppose that for a particular two-month period the average all-milk price is $18.50/cwt. and the formula-determined feed ration per cwt. is $15.50, such that the margin is $3.00/cwt. Consider a dairy producer that traditionally has about 500 cows in his operation, but that is slowly expanding. The producer has selected a $6.50/cwt. SMP margin threshold with a 90% coverage level. Assume his BPH is 10 million lbs. (or 100,000 cwt.), while the APH (i.e., the actual milk production for the preceding year) is 110,000 cwt. and the actual milk production for the two-month period is 18,000 cwt. Then the BMP and SMP payments for the two-month period will be calculated as follows.

The BMP payment rate would be based on the difference between $4.00 and the lower margin:

BMP Payment Rate per cwt. = $4.00 - $3.00 = $1.00

The BMP payment for the two-month period equals the payment rate times the relevant milk production determined as the lesser of 80% of the pro-rated BPH (i.e., 100,000 cwt./6) or the actual milk production for the period:

BMP Payment = ($1.00) * [lesser of (80% of 16,667 cwt.) or (18,000 cwt.)] = $13,333

For the SMP payment, both the payment rate (equal to the SMP margin threshold less the greater of the margin or $4.00) and the relevant milk production must be determined. The SMP payment rate is based on the difference between the SMP protection threshold of $6.50 and the higher of the margin ($3.00/cwt. in this example) or $4.00:

SMP Payment Rate per cwt. = $6.50 - greater of ($4.00 or $3.00) = $2.50

SMP payments are made to the coverage level percentage of the relevant milk production. The selected coverage level is 90%. The relevant milk production is the lesser of the pro-rated APH of 110,000 cwt. (i.e., 18,333 cwt.) or the actual milk production for the two-month period of 18,000 cwt. The SMP payment for the two-month period equals the payment rate times the relevant milk production, determined as:

SMP Payment = $2.50 * (90%) * (18,000 cwt.) = $40,500

Total Payments = BMP + SMP Payments = $13,333 + $40,500 = $53,833

Note that these BMP and SMP payment examples are for a specific two-month period and would have to be recalculated for each succeeding two-month period based on any changes in the average margin. These two-month payments are in contrast to the BMP annual fee and the SMP premium, which are only paid once in a year.

H.R. 2642 would use a similar calculation, but based on a single margin protection formula, coverage threshold, and selected coverage percentage, and using the annually updated production history as compared to actual production.

Premiums for Margin Protection

In order to obtain either SMP (of S. 954) or MP (of H.R. 2642) coverage, a participating farmer would be required to pay an annual premium. Annual premiums are calculated in the same manner under both policy proposals—i.e., the product of the premium rate per cwt., the selected coverage percentage (25% to 90% under S. 954 and 25% to 80% under H.R. 2642), and the relevant production history.

Premium = (Premium Rate) * (Coverage %) * (Production History)

The premium rate varies with both the size of the participating dairy operation (i.e., whether it has greater or less than 4 million lbs. of milk production per year) and the level of margin protection selected (from $4.00/cwt. to $8.00/cwt. in %0.50/cwt. increments) (**Table 3**).

[40] "Dairy Provisions of ARFJA," Novakovic and Stephenson, April 2012, p. 6.

Example of SMP Premium Rate Calculation

Following with the earlier example and based on the S. 954 premium schedule, a dairy producer with an APH of 110,000 cwt. that selects a $6.50/cwt. SMP margin threshold with a 80% coverage level will calculate his premium as follows.

For the first 4 million lbs. (or 40,000 cwt.) of APH, use the SMP premium rate of $0.09/cwt.:

SMP Premium$_1$ = ($0.09) * (80%) * (40,000 cwt.) = $2,880

For all APH milk production above the first 4 million lbs. (or 110,000 cwt. – 40,000 cwt.) use the SMP premium rate of $0.29/cwt.:

SMP Premium$_2$ = ($0.29) * (80%) * (70,000 cwt.) = $16,240

The total SMP premium is the sum: **$2,880 + $16,240 = $19,120**.

This SMP premium is in addition to the BMP annual fee of $500 associated with the APH of 110,000 cwt. or 11 million lbs. of milk production for the previous year. Since H.R. 2642 uses identical premium rates at the $6.50/cwt. margin coverage level, a nearly identical result would occur ($19,120 premium cost) under MP except that there would be no additional annual fee.

It is worth noting that the premium structure of H.R. 2642 strongly encourages participation at the $7.00/cwt. level. A comparison of the total premium cost for insuring margins at $7.00/cwt. under the House and Senate bills for this same hypothetical scenario yields premium costs of $27,040 under H.R. 2642 compared with a much larger $47,520 under S. 954. Of course, S. 954 would also be subject to the annual registration fee. Thus, premium fees would more than double under H.R. 2642 when a participant opts to switch from $6.50/cwt. to $7.00/cwt. margin protection.

Table 3. Premium Rates per cwt. for SMP and MP

Coverage Threshold	S. 954		H.R. 2642	
	1st 4M lbs. of APH	APH > 4M lbs.	1st 4M lbs. of PH	PH > 4M lbs.
$4.00	$0.000	$0.000	$0.000	$0.030
$4.50	$0.010	$0.020	$0.010	$0.045
$5.00	$0.020	$0.040	$0.020	$0.066
$5.50	$0.035	$0.100	$0.035	$0.110
$6.00	$0.045	$0.150	$0.045	$0.185
$6.50	$0.090	$0.290	$0.090	$0.290
$7.00	$0.400	$0.620	$0.180	$0.380
$7.50	$0.600	$0.830	$0.600	$0.830
$8.00	$0.950	$1.060	$0.950	$1.060

Source: ARFJA (S. 954) and FARRM (H.R. 2642) of the 113th Congress.
Note: M = million; APH = Annual Production History, equivalent to the previous year's milk production.

For dairy producers with a production history in excess of 4 million lbs., they would be charged the lower premium rate on the first 4 million lbs. and the higher premium rate on the amounts above that. In 2011, approximately 88% of U.S. dairy farms had annual milk production of 4 million pounds or less and they produced about 25% of total U.S. milk volume.[41]

[41] Farm-size shares are from "Farms, Land in Farms, and Livestock Operations," NASS, USDA, February 17, 2012, and total milk production is from "Milk Production, Disposition, and Income," NASS, USDA, April 25, 2012.

The timing and manner of premium payments is something that USDA would have to develop when it promulgates specific rules. S. 954 instructs USDA to provide more than one method of payment and to use a method that "maximizes dairy operation payment flexibility and program integrity."[42] H.R. 2642 provides dairy producers a choice between a single annual payment of 100% of the premium made by January 15 of the calendar year, or semi-annual payments of 50% each of the premium value made by January 15 and June 15 of the calendar year.

Dairy Market Stabilization Program (DMSP)

Under S. 954, participation in the Dairy Market Stabilization Program (DMSP) is obligatory with participation in DPMPP. In contrast, H.R. 2642 contains no comparable program.[43]

Summary of How DMSP Works

Under DMSP, a dairy operation that participates in DPMPP—in the presence of certain margin conditions (described below)—may receive a lower total return on their milk marketings. The reduction in milk revenues increases as the calculated margin declines below statutorily established thresholds starting at $6.00/cwt. A dairy producer can avoid the payment reductions by restricting his milk deliveries to the percentage of the DMSP base listed in **Table 4**.

When the DMSP margin trigger has been met, USDA will announce that the DMSP stabilization program will be in effect (starting the month after USDA's announcement) and that milk purchasers (or handlers) are ordered to split their payments to milk producers with an increasing portion of payments (ranging from 2% to 8%) directed to USDA and a declining portion of payments (ranging from 98% to 92%) going to the milk producers. The funds diverted to USDA from the reduced milk payments are to be used to purchase dairy products for donation to food banks and other programs, and/or for expanding consumption and building demand for dairy products.

If a producer delivers "penalty" milk, he incurs the cost of production and receives no revenue for that milk, while the "penalty" milk is placed into commercial marketing channels and USDA receives money to fund demand enhancing programs. If a producer elects to forgo producing "penalty" milk, he reduces his cost of production but also reduces his current and future stream of revenue, while the "unproduced" milk is off the commercial market in the short term, perhaps with consequences for months beyond as well, and USDA has no revenue for demand stimulation.

Just as DMSP includes statutorily established threshold conditions or "entry triggers" that trigger the announcement of a DMSP action, there are also "exit triggers" that determine the termination of a DMSP action. Once a DMSP action is terminated, a new program cannot be announced until at least two months have passed. The entry and exit triggers are described below.

Concept Behind DMSP

DMSP payment reductions are intended to have one or both of two basic effects, either of which is expected to result in a higher future farm price for milk—(1) *a demand effect* stimulated by USDA use of diverted milk payment funds, or (2) *a supply effect* as payment reductions

[42] "Dairy Provisions of ARFJA," Novakovic and Stephenson, April 2012, p. 10.

[43] See the **Appendix A** at the end of this report for a discussion of the issues surrounding DMSP.

encourage milk producers to reduce their milk deliveries.[44] In theory, the resultant higher farm price for milk would in turn lead to a higher margin that would subsequently lead to a cessation of USDA margin payments. While these effects are theoretically plausible, it has proven difficult to estimate how empirically significant they might be since estimated outcomes vary substantially with assumptions on participation, coverage levels, etc. In particular, the Congressional Budget Office's (CBO's) analysis of an early version of the dairy margin program without the DMSP component showed federal budgetary savings of $21 million over 5 years and $15 million over 10 years compared to the same dairy margin program inclusive of the DMSP component.[45]

Payment reductions can be avoided entirely by reducing milk production (via altered feed rations, early cull, etc.) and associated marketings to a volume that is below the DMSP base times the DMSP payment reduction percentage (as shown in the lower portion of **Table 4**).

Table 4. DMSP Milk Payment Reduction Factors

Range	$5.00 < Margin ≤ $6.00 for 2 consecutive mos.	$4.00 < Margin ≤ $5.00 for 2 consecutive mos.	Margin ≤ $4.00 for 1 month
Milk payments are made to the greater of these:	98% x (DMSP Base)[a] or 94% x (Actual Marketings)	97% x (DMSP Base) or 93% x (Actual Marketings)	96% x (DMSP Base) or 92% x (Actual Marketings)
No payment reduction is made if:	Actual Marketings < (98% x DMSP Base)	Actual Marketings < (97% x DMSP Base)	Actual Marketings < (96% x DMSP Base)

Source: ARFJA (S. 954), Section 1434, of the 113th Congress.

a. DMSP base is selected at signup as either (1) the average volume of monthly milk marketings during the three months immediately preceding the announcement that the stabilization program is in effect, or (2) the volume of monthly milk marketings for the same month in the year preceding the announcement.

Implementing DMSP

Effective Date and Implementation Rules

According to S. 954, 120 days after the next farm bill has been signed into law, USDA must establish and implement the DPMPP program. Although the Senate bill provides a framework for the DMSP, USDA would have to write rules to fully cover how the program would work.

Selecting the DMSP Base

Any milk producer who registers for DPMPP is automatically covered by the provisions of DMSP. As a result, when dairy producers sign up for DPMPP, they must also elect the method to be used for calculating their dairy operation's *DMSP base* (i.e., historical milk production) to be used in the determination of possible milk payment reductions. A producer's DMSP base selection may be either (1) the average volume of monthly milk marketings during the three months immediately preceding the month that the stabilization program will become effective, or (2) the volume of monthly milk marketings in the preceding year but for the same month that

[44] Dairy Provisions of ARFJA," Novakovic and Stephenson, April 2012, pp. 10-11.

[45] CBO analysis, "Dairy Producer Margin Insurance Program Compared to House Agriculture Committee Chairman's Mark, as Posted 5/10/13," May 10, 2013.

DMSP becomes effective. Regardless of which base formula is adopted, the DMSP base will likely vary from month to month and year to year over the duration of the next farm bill.

Triggering DMSP Payment Reductions

Two conditions could trigger DMSP payment reductions (**Table 4**): (1) the margin is equal to or less than $6.00/cwt. for each month of any consecutive two-month period, or (2) the margin for any single month is equal to or less than $4.00/cwt. If either of these conditions is met, then USDA must announce that DMSP payment reductions will be in effect beginning on the first day of the next month. As a result, for each consecutive two-month period, DMSP uses the higher one-month average margin to assess whether the $6.00/cwt. threshold has been breached.

For example, consider the hypothetical data in **Table 5**. The January-February two-month average margin of $5.95/cwt. would trigger a DPMPP payment at a $6.00 threshold; however, it would not trigger the DMSP because both months were not below the $6.00 threshold. The February-March, March-April, and April-May two-month combinations would trigger the DMSP because, in each case, both consecutive months are below $6.00.

Table 5. Hypothetical Example of One- and Two-Month Average Margins and Their Relation to DPMPP and DMSP Triggers

Month	1-mo. Ave. Margin	Is DMSP Triggered?[a]	2-mo. Ave. DPMPP Margin[b]	Is DPMPP at $6.00/cwt Triggered?
Dec.	$6.50	—	—	—
Jan.	$6.10	no (Dec.-Jan.)		
Feb.	$5.80	no (Jan.-Feb.)	$5.95	yes (Jan.-Feb.)
Mar.	$5.80	yes (Feb.-Mar.)		
Apr.	$5.80	yes (Mar.-Apr.)	$5.80	yes (Mar.-Apr.)
May	$5.80	yes (Apr.-May)		
Jun.	$6.25	no (May-Jun.)	$6.025	no (May-Jun.)

Source: Based on data from "Dairy Provisions of ARFJA," Novakovic and Stephenson, April 2012, p. 12.

Notes: Revised by CRS to accommodate text.

a. For evaluating if a DMSP trigger has been breached, use the higher one-month average margin for each consecutive two months. For calculating the DMSP payment reduction, a two-month rolling average is used.

b. For purposes of calculating and evaluating the DPMPP two-month average margins, the relevant periods are the January-February, March-April, May-June, July-August, September-October, and November-December combinations.

Calculating the DMSP Payment Reduction

Each successive decline in the DMSP margin threshold (below $6.00, $5.00, and $4.00) has two sets of *payment reduction factors* associated with it: a first set that is applied to the DMSP base and a second set that is applied to the actual milk marketings for the period (**Table 4**)—milk payments are made on whichever calculated product is greater. However, no payment reduction is made if the actual milk marketings for that period are less than the calculated product of the payment reduction factor and the DMSP base.

Once the DMSP program has been triggered, then the payment reduction is calculated for each succeeding month that the program is in effect, using a rolling two-month average margin to

determine which payment reduction factors are to be used. Increasingly larger DMSP payment reductions are required as the margin falls below $6.00/cwt. and $5.00/cwt. for any two consecutive months or $4.00/cwt. for any one month.

The DMSP payment reduction factor remains at the largest reduction level reached during the period that DMSP operates, even if the margin rises above the lower $4.00 and $5.00 thresholds. For example, suppose that the margin fell below $4.00/cwt., triggering the maximum DMSP payment reduction (i.e., 96% of DMSP base or 92% of current marketings). As the margin climbs back up to $6.00/cwt., the payment reduction factor remains at the maximum level until the margin exceeds $6.00/cwt. for two consecutive months, whereupon the DMSP is shut off.

Example of a DMSP Reduction in Milk Revenues

Refer to the hypothetical data from **Table 5** where the margin falls below $6.00 for each of two consecutive months in February and March. In April, USDA would announce the implementation of DMSP payment reductions beginning in May. Suppose that the margin of $5.80 was the result of an all-milk price of $20.00/cwt. and feed costs of $14.20/cwt. The $5.80 margin fits within the $5.00 < margin ≤ $6.00 margin range from **Table 4**. Suppose also that a hypothetical participating dairy producer has a DMSP base of 8,200 cwt. per month and actual milk deliveries of 8,400 per month. Then the relevant comparative reduction factor products are:

98% of DMSP Monthly Base = 98% of 8,200 cwt. = 8,036 cwt.

or

94% of Actual Milk Marketings for Month = 94% of 8,400 cwt. = 7,896 cwt.

Milk payment reductions would be based on the greater of the above two factor products (i.e., 8,036 cwt.). Then, the handler payments to the producer on the total volume of milk marketed for the month (i.e., 8,400 cwt.) would be broken into two components as follows:

Total Value of Monthly Milk Payment = $20.00/cwt.[46] * 8,400 cwt. = $168,000

Value of Monthly Milk Payment to Producer = $20.00/cwt. * 8,036 cwt. = $160,720

Reduction = Value of Monthly Milk Payment to USDA = $168,000 - $160,720 = $7,280

Turning Off the DMSP

Once triggered, a DMSP payment reduction stays in place until one of a set of possible market conditions (referred to as *suspension thresholds*) is met—either the margins improve relative to certain criteria, or U.S. prices for either of two basic dairy commodities (cheddar cheese or nonfat dry milk) exceed world prices by certain relative amounts, or a combination of higher margins and price relationships occur simultaneously (**Table 6**).

[46] This price would not necessarily be the USDA, NASS, reported all-milk price, but would be the relevant market price for fluid milk being offered by the particular handler receiving the milk deliveries.

Table 6. DMSP Suspension Thresholds

(DMSP payment reductions are suspended if, for any margin trigger range, the U.S.-to-world price share of selected dairy products is greater than the designated %)

	Margin Trigger Range ($/cwt.)			
U.S.-to-World Price Share:[a]	Margin > $6.00 for 2 cons. mos.	$5.00 < Margin ≤ $6.00 for 2 cons. mos.	$4.00 < Margin ≤ $5.00 for 2 cons. mos.	Margin ≤ $4.00 for 1 month
Suspension Threshold Criteria				
U.S. Cheddar Cheese	any %	> 100%	> 105%	> 107%
U.S. Nonfat Dry Milk	any %	> 100%	> 105%	> 107%

Source: ARFJA (S. 954), Section 1436, of the 113th Congress.

a. U.S.-to-World-Price Share = ratio of U.S. product price to international product price expressed as a %.

According to two prominent dairy economists, the logic of the DMSP design hinges on the expectation that the DMSP, either through a demand effect or a supply effect, may cause the price of farm milk, and consequently the price of exportable dairy products, to increase. To prevent unintended negative consequences for U.S. dairy exports, exit triggers are arranged to terminate the program when the U.S. price gets too high relative to the world price.[47]

Mandated USDA Study of DMSP Market Effects

The Senate-passed bill directs USDA to conduct and report on a study of two specific potential effects of the DMSP program: first, the economic impact of DMSP throughout the dairy product value chain, and second, the impact of DMSP on the competitiveness of the U.S. dairy industry in international markets. A report based on the study would be due no later than December 1, 2016, to both the House and Senate Agriculture Committees.

Summary of Dairy Policy Differences: S. 954 versus H.R. 2642

There are several important differences between the dairy proposals of the Senate-passed S. 954 and House-passed H.R. 2642 that would have to be resolved in a conference agreement. The major distinctions are described here.

1. Under S. 954 dairy producers that participate in the DPMPP are subject to the payment reductions or supply restrictions of DMSP. In contrast, H.R. 2642 does not include DMSP or any payment reductions or supply restrictions in response to low margins or in association with receipt of margin insurance payments.[48]
2. Margin insurance under S. 954 includes two sequential programs: a catastrophic margin insurance, BMP, which provides protection at $4.00/cwt. and requires an annual registration fee; and additional elective buy-up coverage, SMP, which offers coverage in $0.50/cwt. increments from $4.50/cwt. to $8.00/cwt.
3. H.R. 2642 folds the two margin insurance programs of S. 954—BMP and SMP—into a single margin protection program with no annual registration fee. H.R. 2642 uses an almost identical premium rate structure as S. 954 (**Table 3**), but with:

[47] "Dairy Provisions of ARFJA," Novakovic and Stephenson, April 2012, p. 14.

[48] A discussion of supply stabilization and marketing restrictions is provided in an appendix to this report.

   a. $4.00/cwt. margin protection free on the first 4 million lbs. of annual milk marketing;
   b. slightly higher premiums at $4.00/cwt. to $5.00/cwt. margin protection for milk marketings in excess of 4 million lbs.; and
   c. sharply lower premiums at $7.00/cwt. margin protection for all milk marketings (i.e., less than and greater than 4 million lbs.).

4. As a result of their different premium structure, S. 954 tends to favor participation at a $6.50/cwt. margin protection level; whereas H.R. 2642 favors participation at a $7.00/cwt. margin protection level.
5. S. 954 requires USDA to use NASS full-month, all-milk price estimates in calculating margins, thus prohibiting the use of preliminary NASS price estimates, which are available a month in advance of the full-month price estimate and which would expedite margin payments. H.R. 2642 is silent on this instruction.
6. H.R. 2642 allows for annual updating of the production history base for each year of the farm bill (i.e., brings annual production growth under the program). S. 954 fixes the BMP base for the life of the farm bill, but allows the SMP production base to be updated each year.
7. S. 954 offers BMP margin payments on 80% of the BMP fixed production history, and on a participant election of from 25% to 90% of the SMP production history base. H.R. 2642 contracts the coverage percent election to a range of 25% to 80% of the production history base.
8. H.R. 2642 places no limit or cap on the size of the potential per-unit payment rate (defined as the difference between the all-milk price and the formula-defined feed-cost ration). In contrast, S. 954 excludes the potential for a negative margin in instances where the feed-cost ration exceeds the all-milk price.
9. Under S. 954 a dairy operation may only participate in DPMPP or the existing Livestock Gross Margin (LGM) dairy program, but not both. H.R. 2642 is silent regarding participation in both DPMPP and LGM.
10. H.R. 2642 ends the MILC program immediately, whereas S. 954 extends it for about nine months (through June 30, 2013), while a dairy producer is deliberating whether to participate in DPMPP or not—once a DPMPP participation decision is made, MILC is no longer an option for a producer.
11. H.R. 2642 requires that USDA announce the establishment and retroactive availability of a DPMPP program within 30 days of the next farm bill being signed into law. S. 954 has no retroactive option, but requires that USDA establish and implement a DPMPP program within 120 days of being signed into law.
12. S. 954 mandates a USDA study of the impact of DMSP program on the economic impact throughout the dairy product value chain, and on the competitiveness of the U.S. dairy industry in international markets. H.R. 2642 has no similar provision.
13. S. 954 exempts DPMPP and DMSP from standard rulemaking procedures. H.R. 2642, via an amendment adopted by the House Judiciary Committee, removes this exemption and requires USDA to determine the market impacts of the new program during the rulemaking process.

14. Unrelated to the newly proposed programs, H.R. 2642 makes no changes to Federal Milk Marketing Orders (FMMOs). In contrast, S. 954 mandates a pre-hearing procedure to consider alternative formulas for Class III milk product pricing, and mandates a study of the effects of replacing end-use milk pricing with other alternatives.
15. S. 954 provides an option for funding of the FMMO review commission from sources other than annual appropriations. H.R. 2642 eliminates the FMMO review commission.
16. S. 954 adds requirements to mandatory dairy price reporting that specify a reporting periodicity of greater than once per month. H.R. 2642 has no similar provision.

Estimating the Potential Effects of New Dairy Policy

DPMPP and DMSP versus Current Law

Several empirical studies of early versions of the proposed dairy programs—including the elimination of current price and income supports and their replacement with the margin-based protection programs (BMP and SMP) and the dairy market stabilization program (DMSP)—have been undertaken in an attempt to ascertain both the potential federal cost and the potential effectiveness of the new programs for delivering timely assistance to dairy operators while stabilizing dairy operating margins.[49]

The studies have generally concluded that

- compared to the current dairy price and income programs, DPMPP will make payments less often, but will provide a higher safety net in extremely low margin events;
- the combination of DPMPP and DMSP appears to substantially mitigate the dairy operating margin volatility;
- optimal program benefits are conferred for nearly all dairy farm sizes for participation at either the $6.50/cwt. or $7.00/cwt. supplemental margin protection levels (this results in large part because DMSP payment reductions will begin when the margin drops below $6.00/cwt., so margin protection effectively needs to be at least at the $6.00/cwt. level on average to offset milk payment reductions); and
- overall effects on milk supply, prices, and trade were relatively small; however, contradictory trade results emerged where one study found that milk exports declined slightly due to lower milk supply (Brown, April 2012), while another

[49] For market-scale results, see Charles Nicholson and Mark Stephenson, *Market Impacts of the Dairy Security Act (H.R. 3062) and the Dairy Provisions of the Rural Economic Farm and Ranch Sustainability and Hunger Act of 2011 (S. 1658)*, Dairy Markets and Policy (DMAP) Consortium, October 2011a; Scott Brown, *The Effects of a Modified Dairy Security Act of 2011 on Dairy Markets*, FAPRI, April 2012; *The Impacts on Dairy Farmers and Milk Markets of a Standalone Dairy Producer Margin Insurance Program*, Mark Stephenson, July 2012; and *Analysis of NMPF's Foundation for the Future Program*, FAPRI-MU Report #05-10, June 2010. For farm-scale results, see Charles Nicholson and Mark Stephenson, *Farm-Level Impacts of the Dairy Security Act (H.R. 3062) and the Dairy Provisions of the Rural Economic Farm and Ranch Sustainability and Hunger Act of 2011 (S. 1658)*, Dairy Markets and Policy (DMAP) Consortium, October 2011b; and Mark Stephenson and Andrew Novakovic, *Program on Dairy Markets and Policy Information Letter*, PDMP Briefing Paper 120-05, April 2012.

> study found that net milk exports expanded due in part to slightly lower milk prices (Nicholson and Stephenson, October 2011b).[50]

Margin Protection With and Without DMSP

An early analysis of a stand-alone margin insurance program without the market stabilization component (Stephenson, July 2012) found that such a program could provide effective risk management results, although costs and results varied under different participation assumptions.

Three studies released in the first half of 2013 include a comparison of the economic effects of the DPMPP/DMSP joint program (referred to as the Dairy Security Act or DSA) of H.R. 1947 and S. 954 with the GSA-amended version of H.R. 1947.[51] Two of these studies (Newton *et. al.* (April 15, 2013) and Brown and Madison (May 2013), appear to have used early versions of GSA that included a fixed historical milk base against which margin payments were made. Such a fixed base excludes growth in milk marketings from participation in the margin program and, as a result, keeps program costs down. In contrast, the version of GSA that was passed during the House floor debate (H.Amdt. 228 to H.R. 1947) includes a modification that allows for annual updates of the milk marketing base, thus allowing for growth in milk marketings to be included under the margin protection program. As a result, these two studies potentially overstate the cost savings associated with GSA relative to the dairy policy of House-reported H.R. 1947. However, the third study (Woodward and Baker (June 9, 2013), incorporated GSA as adopted on the House floor thus fully capturing the annual marketings update aspect.

Results from these three studies are briefly summarized here, but interested parties are encouraged to consult the papers for greater detail.[52]

Newton et al. (April 15, 2013) found that:

> Both DSA and GSA effectively provide catastrophic risk insurance and revenue enhancement for farms with stable and moderately growing milk marketings. For sufficiently high DSA participation rates, and sufficiently low price-elasticity of demand for milk in aggregate, DMSP has the potential to reduce government outlays and accelerate margin recovery in low-margin states relative to DSA under low participation, high-price-elasticity environment. Furthermore, DMSP is not likely to provide long-term obstacles to growth for participating farms with an aggressive growth plan unless generous margin insurance induces a long-term oversupply of milk.

Brown and Madison (May 2013) found that:

> Government costs would have been over $1 billion higher during the 2009 to 2012 period under GSA than DSA as a result of an assumed higher coverage rate choice (the GSA premium schedule encourages participation at the $7.00/cwt. level whereas DSA encourages a

[50] Ibid.

[51] John Newton, Cameron S. Thraen, Marin Bozic, Mark W. Stephenson, Christopher Wolf, and Brian W. Gould, "Goodlatte-Scott vs. the Dairy Security Act: Shared Potential, Shared Concerns and Open Questions," *Briefing Paper Number 13-01*, Midwest Program on Dairy Markets and Policy, 2013 Farm Bill Dairy Analysis Group, April 15, 2013; Scott Brown and Daniel Madison, *A Comparison of 2013 Dairy Policy Alternatives on Dairy Markets*, Agr. Markets and Policy Div. of Applied Social Sciences, Univ. of Missouri, May 2013; and Joshua D. Woodward and Dustin Baker, "2013 Farm Bill Dairy Title Proposal Redistributes Program Benefits toward States with Larger Farms," *Working Paper*, Dyson School of Applied Economics and Management, Cornell Univ., June 9, 2013. The Woodward-Baker paper also appeared in *Choices*, as "2013 Farm Bill Dairy Title Proposals Redistribute Program Benefits toward States with Larger Farms," *Choices*, 28(3), 3rd Quarter 2013.

[52] The indented text is CRS paraphrasing of each study's results and does not represent direct quotations from the respective studies.

> $6.50/cwt. level) and no supply adjustment mechanism to offset any positive supply response from margin payments. Milk production is virtually unchanged under either policy option, although DSA's DMSP operation resulted in a few instances of short-term reductions in milk supplies of up to 3%. Market prices for milk increase on average by $0.06/cwt. under DSA and decline on average by $0.19/cwt. under GSA. Exports of dairy products decline under DSA when DMSP operates. Producer net revenue increases by $0.55/cwt. under DSA and by $0.48/cwt. under GSA. Producers experience the largest revenue increase under DSA with a $6.50/cwt. margin coverage rate, while revenue increases are maximized under GSA with a $7.00/cwt. margin coverage rate.

Woodward and Baker (June 9, 2013) found that:

> In general, the government loss ratio [the ratio of expected margin payments divided by the premiums paid] is significantly higher for the DPMPP with DMSP proposal than it is under the GSA proposal. This holds for all coverage levels with the sole exception of the $7.00/cwt. margin.

Rather than focus on the merits of DMSP versus no DMSP, the Woodard and Baker (June 9, 2013) analysis focused instead on equity issues related to the redistribution of program benefits among producers of various sizes under a shift from the MILC program with production cap to the DPMPP program with no production cap. According to their analysis, the payment cap of 2.985 million pounds under the MILC program clearly favors smaller milk producers whereas the DPMPP with no payment cap based on output tends to favor larger producers. Their study suggests that:

> There exists a large divergence in program benefits by farm size with MILC strongly favoring smaller dairy farms and DPMPP favoring large farms. This divergence is due almost entirely to the production caps of MILC being removed under DPMPP. For producers with milk marketings under the MILC production cap, MILC tends to pay out more than DPMPP (except under high coverage levels). For producers with milk marketings well over the MILC production cap, DPMPP total payouts average 11 times greater than under MILC.
>
> With respect to DMSP, states that tend to support the DMSP component of the dairy policy proposal (e.g., California, Idaho, New Mexico, Washington, Oregon, and Arizona) tend to also have higher feed costs, import a large proportion of their feed, have a higher concentration of large farms, and/or may not currently be seeking to expand production. These "larger" types of farms also tend to have lower fixed costs per unit of capacity than do smaller firms, implying that they have a lower opportunity cost of idling production capacity. Meanwhile, states that have a higher proportion of small farms, and/or that grow much of their own feed, on balance tend to reject the idea of supply controls (e.g., New York, Wisconsin, Pennsylvania, and Minnesota).[53]

Uncertainties

All of these studies have to make assumptions about farm participation and its distribution across margin thresholds (from $4.00/cwt. to $8.00/cwt.) and across coverage levels (from 25% to 90%) when they try to estimate or discuss marketwide effects. In general, when the studies are based on relatively high participation levels they tend to find more positive program outcomes—for example, lower cost to taxpayers, and greater success at stabilizing operating margins.

Another consideration is the potential supply-inducing effect of indemnity payments, which would likely push prices and margins downward. Evaluating how dairy producers might respond

[53] The authors state in their study that the grouping of farmer support by state is undocumented, but is instead a qualitative assessment based on their best judgment.

or adjust their milk marketings under the market stabilization program has proven particularly difficult given the unique nature of DMSP and the lack of historical precedent regarding past supply management systems (see the following **Appendix B**). The two previous historical examples of supply management in the United States were primarily voluntary programs that provided participation incentives without consequent penalties. DMSP is a penalty-based program with a consequent opportunity of reward.

Most milk processors are strongly opposed to any form of supply management that might restrict milk supplies, prevent full utilization of their investment in processing capacity, and limit their ability to meet growth in consumer demand wherever it may occur. Free-marketers oppose any government program that shelters the dairy sector from market forces, thus limiting flexibility and locking current resources into place.

And Questions for Policymakers

What will be the cost of this program going forward, and what share of that belongs to farmers, or which farmers? The proposed tiered-premium structure appears to favor smaller farmers with a larger premium subsidy (although premiums and subsidies have not been actuarially assessed *ex ante*). This is unlike crop insurance. But the flip side is that there is no income eligibility or payment limitation on these "indemnities" as there was with the MILC program.

What is the relationship between dairy output prices and feed costs? As feed costs equilibrate at lower levels, to what extent will milk prices follow suit? Is the supply stabilization component an essential part of a margin-based strategy? If a margin-based dairy program were to achieve high rates of participation, how costly could the program become under supply-inducing indemnity payments in the absence of a supply stabilization component?

Budget Outlays: Historical and Projected

USDA outlays for the major dairy support programs have trended downward since the 1980 farm bill period (**Table 7**). An outlook for strong dairy product prices for the next several years in the CBO May 2013 baseline accounts for the relatively small net outlay projections of $161 million over 5 years (FY2014-FY2018) and $250 million over 10 years (FY2014-FY2023) for the major dairy programs, assuming an extension of current dairy policy.

CBO also has produced budget scores for different versions of the Senate and House 2013 farm bills. With respect to the House version of the 2013 farm bill, CBO scored dairy policy in the initial H.R. 1947 as reported by the House Agriculture Committee and a scenario of H.R. 1947 that included the Goodlatte-Scott Amendment (**Table 7**). It is assumed that this latter cost estimate is representative of the dairy proposal in the House-passed H.R. 2642.

According to CBO, replacing current dairy policy with the new dairy proposals of the House and Senate would result in projected additional budgetary outlays above baseline over the 5-year (FY2014-FY2018) and 10-year (FY2014-FY2023) periods of:

- $28 million and $302 million, respectively, under S. 954,[54]

[54] CBO scored the dairy policy proposal contained in S. 954 as posted on the website of the Senate Committee on Agriculture, Nutrition, and Forestry on May 9, 2013. The dairy policy of the final Senate-passed version of S. 954 was identical to the CBO-scored version. See CBO letter to Chairwoman Stabenow, Committee on Agriculture, Nutrition, and Forestry, U.S. Senate, May 13, 2013.

- $44 million and $436 million, respectively, under H.R. 1947 (as reported by the House Agriculture Committee),[55] and
- $23 million and $421 million, respectively, under a version of H.R. 1947 as amended by the proposed Goodlatte-Scott amendment (H.Amdt. 228 to H.R. 1947) without the supply restrictions proposed under DMSP of S. 954.[56]

A CBO score of the program details of Title I in House-passed H.R. 2642 was not yet available as of the date of this report. Instead, the CBO score of the dairy proposal for H.R. 1947 inclusive of the Goodlatte-Scott amendment, which eliminates DMSP, is cited above and in **Table 7**.

Table 7. U.S. Dairy Programs, Historical and Projected USDA Outlays

($ millions)

Farm Bill	Fiscal Years	DPPSP	Market Loss Assistance	MILC	DEIP	Total
1980	FY1981 - FY1985	10,592	—	—	—	10,592
1985	FY1986 - FY1990	6,221	—	—	8	6,229
1990	FY1991 - FY1996	1,388	—	—	544	1,932
1996	FY1997 - FY2002	2,284	1,000	—	481	3,765
2002	FY2003 - FY2007	1,120	—	2,538	90	3,748
2008[a]	FY2008 - FY2012	280	290	1,091	28	1,688
CBO 5-year Projections for FY2014-FY2018						
CBO Baseline[b]	FY2014 - FY2018	27	11	99	25	161
S. 954[c]	FY2014 - FY2018	—	—	—	—	+28
H.R. 1947[d]	FY2014 - FY2018	—	—	—	—	+44
GSA[e]	FY2014 - FY2018	—	—	—	—	+23
CBO 10-year Projections for FY2014-FY2023						
CBO Baseline[b]	FY2014 - FY2023	47	18	140	45	250
S. 954[c]	FY2014 - FY2023	—	—	—	—	+302
H.R. 1947[d]	FY2014 - FY2023	—	—	—	—	+436
GSA[e]	FY2014 - FY2023	—	—	—	—	+421

Sources: Historical data are assembled by CRS using various USDA data sources; projected data for FY2014-FY2023 are from the Congressional Budget Office (CBO), May 2013 Baseline for Farm Programs, May 14, 2013.

Notes: USDA's Commodity Credit Corporation total outlays do not include the implicit costs to consumers of tariff-rate quotas which limit access to cheaper international products. Also, there are no federal outlays for FMMOs other than for their administration.

[55] CBO scored the dairy policy proposal contained in H.R. 1947 as ordered reported by the House Committee on the Judiciary on June 5, 2013; See CBO letter to Chairman Goodlatte, Committee on the Judiciary, U.S. House of Representatives, June 7, 2013.

[56] The Goodlatte-Scott amendment (H.Amdt. 228) was adopted during the House floor debate of H.R. 1947 by a vote of 291-135 (June 20, 2013); however, the entire bill (H.R. 1947) eventually failed to pass (195-234). A subsequent version of the 2013 farm bill, H.R. 2642, that incorporated the provisions of the Goodlatte-Scott amendment was passed by the full House (216-208) on July 11, 2013. See CBO, "Dairy Producer Margin Insurance Program Compared to House Agriculture Committee Chairman's Mark, as Posted May 10, 2013," June 10, 2013.

a. Data for FY2012 are not final, while FY2013 data are not complete and have been excluded from this table.

b. Projections from the CBO May 2013 baseline, assuming continuation of current law.

c. CBO Cost Estimates for S. 954 (as reported by the Senate Agriculture Committee) of the 113th Congress, as scored against CBO's May 2013 baseline. See CBO letter to Chairwoman Stabenow, Committee on Agriculture, Nutrition, and Forestry, U.S. Senate, May 13, 2013.

d. CBO Cost Estimates for H.R. 1947 (as reported by the House Committee on the Judiciary) of the 113th Congress, as scored against CBO's May 2013 baseline. See CBO letter to Chairman Goodlatte, Committee on the Judiciary, U.S. House of Representatives, June 7, 2013.

e. CBO score of the Goodlatte-Scott amendment (GSA) compared to the chairman's mark (May 10, 2013). The chairman's mark had the same CBO score for Title I, Dairy Programs, as H.R. 1947 reported to the House. See CBO, "Dairy Producer Margin Insurance Program Compared to House Agriculture Committee Chairman's Mark, as Posted May 10, 2013," June 10, 2013.

Appendix A. Debate Over the Market Stabilization Proposal

What Is DMSP's Intended Purpose?

The DMSP market stabilization proposal is being debated by dairy producer groups, which generally support it, and dairy processors and certain consumer groups who oppose it. The National Milk Producers Federation (NMPF), the largest U.S. dairy producer organization,[57] is a principal proponent of the dairy market stabilization concept. NMPF describes the purpose and need for DMSP as follows:[58]

> **What is the purpose of the DMSP?** The purpose of the DMSP is to reduce margin volatility for dairy producers. The DMSP acts as an early warning system that sends strong and timely signals to producers participating in the margin protection program that small temporary adjustments in their milk production need to be made to stave off long-term reductions in their overall margins. The DMSP is designed to act swiftly and infrequently to address brief market imbalances.
>
> **Why is any type of supply management needed in the U.S. dairy industry?** The DMSP does not fit the traditional definition of a supply management program. However, market stabilization is part of this proposal because there are times when imbalances occur in the marketplace that negatively impact dairy farmer margins. In 2009, dairy farmers did not overproduce their way into extremely low margins, but demand, both domestically and internationally, collapsed with the global recession. The low milk prices combined with high feed costs resulted in the lowest margins most producers have ever experienced. Situations like this ultimately correct themselves, but without timely and effective intervention, they can drag on too long and drag down too many farmers along the way.

Alternate Viewpoints

The International Dairy Foods Association (IDFA), representing the nation's dairy manufacturing and marketing industries and their suppliers,[59] is a principal opponent of the dairy market stabilization program. IDFA argues:[60] "A new government "Dairy Stabilization" program would routinely increase our domestic prices above international prices and make our dairy industry less competitive.... Government supply management programs thwart export growth.[61] That's why no other U.S. commodity has limits on production."[62]

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[57] NMPF represents 30 member-based cooperatives with a combined membership of over 32,000 U.S. dairy producers. See http://nmpf.org/.

[58] See Foundation for the Future (FTF), NMPF, "Questions About Dairy Market Stabilization Program," at http://www.futurefordairy.com/faqs/dairy-market-stabilization-program.html

[59] IDFA has a membership of 550 companies including 200 dairy processors and 330 companies that produce and supply processing equipment and materials. See http://www.idfa.org/.

[60] IDFA one-pager, "Why Give U.S. Competitors A Trade Advantage? Oppose Milk Supply Limits In The Farm Bill," at http://www.idfa.org/files/resources/trade_aspect.pdf.

[61] Actually most government supply management programs (as embodied in the production-incentive-type programs of Titles I and XI of the 2008 farm bill) artificially encourage export growth by incentivizing over-production in the marketplace. In contrast, DMSP dis-incentivizes over-production relative to the marketplace.

[62] As mentioned earlier, there are several different U.S. farm programs that involve direct supply management including several fruit and tree nut marketing orders, the sugar program, and the so-called farm permanent law. Furthermore, in direct contradiction to the IDFA statement, DMSP includes no production limits, caps, or quotas.

During the House Agriculture Committee markup of H.R. 1947 in the 112th Congress, Representatives Goodlatte and Scott first introduced their amendment (No. 085) to remove the market stabilization program from the dairy subtitle D while retaining the dairy producer margin protection program. In a "Dear Colleague" letter dated July 10, 2012, they argued:

> A government supply management program arbitrarily penalizes consumers and dairy product manufacturers who respond to consumer demands, by uniformly requiring milk supply contraction and raising milk prices above not [sic] market clearing levels. The Dairy Market Stabilization Program, which our amendment eliminates, is the only U.S. commodity program that would allow this level of government market intervention in domestic commodity supply decisions.[63]

A major concern expressed by urban constituencies in regard to domestic milk supplies is that a "supply management" program would potentially both limit the volume of milk supply available to consumers and raise the price for the milk that is available.

[63] See previous footnote.

Appendix B. Historical Dairy Supply Management Programs

The goal of dairy supply management programs is generally to enhance and stabilize farm-level milk prices by controlling the amount of milk marketed or to mitigate the increased production that would be stimulated by policy that supports diary product markets at a higher-than-market-equilibrium price. Unlike Canada and the European Union (EU), the United States has never implemented a mandatory dairy supply management program; however, the 1990 farm bill had a requirement that USDA implement a supply management program if federal dairy product purchases exceeded 7 billion lbs.—this requirement was never implemented. Since the mid-1980s there have been two government-sponsored and one industry-sponsored major voluntary supply management dairy programs in the United States, all funded in part through dairy farmer assessments.

U.S. Government-Sponsored, Voluntary Supply Management Programs

In the mid-1980s Congress authorized two voluntary dairy supply management programs—the **1984-85 Milk Diversion Program** and the **1987 Dairy Termination Program (Whole Herd Buyout)**.[64] Under the Milk Diversion Program, dairy farmers who reduced milk marketings 5% to 30% from a base level were paid $10/cwt. on the reduced marketings. The Milk Diversion Program cut milk production sharply in 1985, but had no long-term effect. Under the 1987 Dairy Termination Program, the government accepted bids from dairy farmers who were willing to slaughter all their dairy cattle and remain out of the dairy business for at least five years. The Whole Herd Buyout Program was more successful in moderating milk production trends, but the induced slaughter of dairy cows negatively affected beef markets.

Novakovic and Stephenson have pointed out that, in contrast to the Milk Diversion Program and Dairy Termination Program, which rewarded farmers for cutting back on milk production, the DMSP program punishes farmers for increasing milk marketings relative to a base.[65]

U.S. Industry-Sponsored Supply Management Programs

An industry-sponsored voluntary supply management program—**Cooperatives Working Together (CWT)**—was initiated in 2003 by the National Milk Producers Federation and remains ongoing.[66] Participating dairy farmers commit 2¢ per cwt. of milk marketed. Presently, participants in CWT include dairy farmers from every state, producing almost 70% of the nation's milk. CWT funds have been used for both herd retirement (the last round was conducted in 2010) and export assistance.

[64] "Dairy Policy Brief #4: Voluntary Supply Management," Food and Agricultural Policy Research Institute (FAPRI) and the University of Wisconsin, Madison, *Dairy Policy Briefs*, June 2006.

[65] "Dairy Provisions of ARFJA," Novakovic and Stephenson, April 2012, p. 17.

[66] For more information, see the Cooperatives Working Together website, at http://www.cwt.coop/about/about_whatis.html.

Foreign Government-Sponsored Mandatory Supply Management Programs

Canada and the EU have used marketing quotas which explicitly specify the maximum amount of milk that individual dairy farmers can sell and usually apply stiff economic penalties to any sales in excess of the assigned farm quota. The EU will gradually increase its dairy quotas until an entire phase-out of its milk quota system in April 2015 in accordance with implementation of its 2009 Health Check. Canada continues to maintain its milk quota system.

Potential Problems Associated With Supply Management Programs

Potential problems associated with voluntary supply management programs are adequate participation and funding (which is linked directly to participation), free riders (i.e., nonparticipants benefit fully from the success of any supply management program but without the supply limits), and some export market issues. Since CWT dairy product export support varies with market conditions, exports under this program may not be viewed as a reliable source by less price sensitive markets. In addition, there is some uncertainty about whether CWT export subsidies are compatible with World Trade Organization obligations.

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