

Program on Dairy Markets and Policy

Information Letter

Dairy Provisions of the Senate Agriculture Reform, Food, and Jobs Act of 2012

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Introduction

On 26 April 2012, the U.S. Senate Committee on Agriculture, Nutrition and Forestry completed the Agriculture Reform, Food, and Jobs Act of 2012 (the Act),¹ which now heads to the full Senate for discussion, possible revision, and possible passage. If the Senate passes a bill, it will then be forwarded to the House. The House can pass an identical bill and then forward it to the President for his approval. Or, it can pass its own bill and go to a Conference with the Senate, where they will iron out their differences. Or, it can vote against the bill, not offer an alternative and let it die right there.

The House Committee on Agriculture has announced and begun a series of preparatory hearings of its various subcommittees to gather more specific testimony on pieces of a Farm Bill. It clearly is on a path to produce a bill. What that bill will be is not exactly clear, but two things are certain. One, it will contain a lot of the same architecture and provisions found in the Senate committee bill. Two, it won't be identical. The dairy title is one that will probably look more similar than different, but it is quite possible that there will be some important differences. While the House of Representatives is sorting out what it will do, let's take a look at what the dairy provisions are in the Act that has been recommended by the Senate agriculture committee.

The Basic Outline

The dairy provisions of the Senate Act are a variation of H.R. 3062, the Dairy Security Act introduced in the House of Representatives by Collin Peterson and his co-sponsors in July 2012. The DSA is based on the Foundation for the Future proposal developed by the National

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¹ <http://www.ag.senate.gov/issues/farm-bill>

Milk Producers Federation. As such, the Senate Act contains a basic structure and content that is very familiar to dairy policy watchers. However, there are a number of parts in the Senate Act that deviate from the original plan. For those who have been paying attention to proposals and false starts beginning in Fall 2011, the Senate Act has a few more surprises.

The basic outline remains the same. Existing safety net programs are repealed and replaced with two new programs. The programs that are repealed are:

1. The Dairy Product Price Support Program (DPPSP), effective immediately
2. The Milk Income Loss Contract (MILC), effective 30 June 2013
3. The Dairy Export Incentive Program (DEIP), effective immediately

Note that the DPPSP, passed in the 2008 Food, Conservation and Energy Act (farm bill) is repealed but the permanent Dairy Price Support Program that is contained in the 1949 Agricultural Act is not.

The new programs are:

1. The Dairy Production Margin Protection Program (DPMPP) – a program that pays participating farmers an indemnity when a national benchmark for milk returns over feed costs (the actual dairy production margin or ADPM) falls below an insured level that can vary over a \$4 per cwt range at the discretion of participating farms. This is essentially a countercyclical payment program based on margins instead of the more familiar output price only counter cyclical programs
2. The Dairy Market Stabilization Program (DMSP) – a program that requires farmers who elect to participate in DPMPP to also be subject to the possibility of controls on the maximum amount of milk for which they may receive commercial payment from buyers when the ADPM falls below certain levels. This "growth management" program seeks to short supply in periods when margins are low in order to cause the price of milk, and consequently margins, to rise.

The Act also contains provisions to extend:

1. The Dairy Forward Pricing Program – which allows buyers of milk who are regulated under Federal Milk Marketing Orders to offer farmers forward pricing on Class II, III, or IV milk, instead of paying the minimum Federal order blend price for pooled milk.²
2. The Dairy Indemnity Program – which provides payments 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

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<http://www.ams.usda.gov/AMSV1.0/ams.fetchTemplateData.do?template=TemplateL&navID=dyforwardpricingpgmDairyPublications&rightNav1=dyforwardpricingpgmDairyPublications&topNav=&leftNav=&page=DairyForwardPricingProgram&resultType=&acct=dgeninfo>

pesticides. Payments are made to manufacturers of dairy products only for products removed from the market because of pesticide contamination.³

3. The Dairy Promotion and Research Program, more commonly identified as the National Dairy Board.⁴
4. The Federal Milk Marketing Order Review Commission, which was first authorized in the 2008 FCEA. The Commission was envisioned by Congress to provide a study and review of Federal Milk Marketing Orders, but it was never implemented for lack of funds and/or sufficient interest.

Lastly, the Act instructs the Secretary on two existing programs: 1) mandatory price and stocks reporting and 2) Federal Milk Marketing Order regulatory announcements. And, it requires that USDA submit a report related to the Act.

Existing language is expanded that instructs USDA to implement a system whereby relevant dairy industry participants must report wholesale dairy product prices or commercial stocks of bulk dairy commodities on at least a monthly basis. The mandate of USDA is broadened to include any "product that may significantly aid price discovery".

USDA is instructed to create a Federal Milk Marketing Order Information Clearinghouse that would "educate the public" about the Marketing Order system and provide various types of information about Federal Order referenda. Each Market Administrator is further instructed to provide information about upcoming referenda on a website and by announcements in "major agricultural and dairy-specific publications". This is a curious section insofar as USDA can quite plausibly say that they do all of this already. The Act itemizes several specific types of information. The only one that we see which isn't routinely announced by USDA is information on specific cooperative voting procedures, although it is not clear if the Act language could be satisfied by a more general description of how farmers can vote through their cooperatives.

One amendment to the dairy title that was accepted instructs USDA to conduct a study of the economic impact of the Dairy Market Stabilization Program. In particular, USDA is asked to consider and estimate the economic impact: 1) throughout the dairy product value chain, including the impact on a) producers, b) processors, c) domestic customers, d) export customers, e) actual market growth and f) potential market growth, farms of different sizes, and different regions and States; and 2) the impact of the program on the competitiveness of the United States dairy industry in international markets. The report is due no later than December 1, 2016,

The Act imagines becoming effective on 1 October 2012 and being effective through 31 December 2017, more or less the normal 5-year farm bill life.

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http://www.fsa.usda.gov/FSA/newsReleases?area=newsroom&subject=landing&topic=pfs&newstype=prfactsheet&type=detail&item=pf_20100902_insup_en_dairy10.html

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<http://www.ams.usda.gov/AMSV1.0/ams.fetchTemplateData.do?template=TemplateN&navID=IndustryMarketingandPromotion&leftNav=IndustryMarketingandPromotion&page=DairyProducerCheckoffPrograms&description=Dairy+Producer+Checkoff+Programs>

The Actual Dairy Production Margin

A key feature of the overall plan is that it changes the focus of the safety net from the price of milk to a margin. The margin is formally labeled the Actual Dairy Production Margin (ADPM), but it might more descriptively be called Milk Returns Over Feed Costs. It determines a margin as the difference between the national average price for all (grades of) milk and the cost of three feeds that represent the bulk of purchased feeds fed to dairy cattle—corn, soybean meal and alfalfa hay.

The National Milk Producers Federation developed the original formulation for the feed cost component of the calculation. It was intended to represent the basket of feeds that would be consistent with recommended nutrition for an entire dairy herd. In other words, it included the feed required to feed dry cows and young cattle that would be associated with a given number of milking cows. This total cost of feed is divided by a normative production level to determine a feed cost per cwt.

The methodology boiled down to a simple equation that weights the national average prices received for corn and alfalfa hay as determined by NASS and the Central Illinois soybean meal price as reported in Market News by AMS.

A margin would be calculated monthly and for almost all applications in the Act, a 2-month average would be determined for consecutive pairs of months in the calendar year. Because USDA is instructed to determine a margin as soon as possible after the necessary prices are reported, NASS preliminary estimates would be used for the second month in the 2-month average, but NASS revised estimates would (likely) be used for the first month.

The formula contained in the Act is as follows, where all prices are expressed in the common units for each price series and each price series is as described above:

$$\begin{aligned} \text{ADPM} &= && \text{All Milk Price} \\ &&& \text{Minus the sum of} \\ &&& 1.0728 \times \text{the price of corn} \\ &&& 0.00735 \times \text{the price of soybean meal} \\ &&& 0.0137 \times \text{the price of alfalfa hay} \end{aligned}$$

This formula is a subtle change from the DSA. The parameters of the formula are 90% of those specified in the DFA. The reason for this unexplained, but it would seem to be a reasonable guess that this was done to achieve budget savings, as opposed to a substantive recalculation about the best measure of the cost of feed. The absolute magnitude of this 10% reduction increases with the prices of the feed inputs. Because there is no change in the price of milk used in the margin formula, the effect of lowering the cost of feed is to increase the margin by the same absolute amount. For feed prices in the range observed from 2007-11, the result is that the Senate margin is about \$1 per cwt higher than the DSA margin. Although the ups and downs of both formulas are virtually identical in appearance, the change in formula has a significant implication for the effectiveness of the DPMPP and DMSP.

Dairy Production Margin Protection Plan (DPMPP)

Effective Date and Specific Rules

Thirty (30) days after the Act becomes effective (signed by the President), USDA must notify farmers that there will be a DPMPP; 120 days after it becomes effective the program must be implemented. Thus, if a bill as actually passed by October 1, the DPMPP would become available on 1 February 2013.

During this time, USDA's Farm Service Agency will have to write specific rules on how to conduct this program. Although the Act provides quite a bit of detail about the program, there are always a host of details that must be determined to implement a new program. This may well also require action by the Agricultural Marketing Service (Federal Milk Marketing Orders) and the National Agricultural Statistics Service. It requires the usual in-house review as well as a review by the Office of Management and Budget. All of this is normal procedure.

Overlap with MILC and LGM-D

The MILC is authorized through the end of June 2013. For the few months that a DPMPP and MILC might overlap, each farmer can choose to participate in one or the other. However, as soon as a producer elects to participate in the DPMPP, the decision is irrevocable.

The second amendment to the original committee proposal clarifies that the extension of the MILC into 2013 would be done using the program parameters that are in place through 31 August 2012. This is potentially important insofar as the FCEA of 2008 specifies a significant reduction in MILC beginning in September 2012. Of course, this only matters if MILC payments are triggered after 1 September. Current futures market prices suggest this is possible, but not likely.

If a producer signs up for DPMPP, they become ineligible to sign up for a Livestock Gross Margin – Dairy Cattle (LGM-D) policy, offered through the Risk Management Agency of USDA.⁵ This would be a one-time decision that would determine program participation for the life of the Act.

Basic Structure

The DPMPP pays an indemnity to participating farmers when a national benchmark measure of gross returns to milk marketed by farms less a national benchmark cost of basic dairy feeds falls below certain thresholds. This national benchmark is referred to formally as the Actual Dairy Production Margin (ADPM) or more commonly the dairy margin or milk returns over feed cost (MROFC).

As originally proposed by NMPF, there are a Basic Production Margin Program and a Supplemental Production Margin Program. The same concept underlies both, but there are several important differences between the two.

1. The obvious first difference is that the supplemental program allows producers to insure (receive payments) at higher national benchmark margin levels.

⁵ <http://www.rma.usda.gov/help/faq/lgmdairy.html>

2. The second obvious difference is that the Basic plan is free, but farmers have to pay increasing amounts for increasingly higher levels of coverage.
3. Another difference is that the Basic program calculates a base level of marketings for each farm that does not change over the life of the program. Moreover, a farmer signs up for the Basic plan once and is enrolled in every year thereafter. For the Supplemental program, farmers can elect to participate annually and can enroll in any year regardless of whether they enrolled in a previous year. In addition, each producer's base is calculated annually and therefore changes every calendar year.
4. Each program limits how much of a producer's base can be covered. In the case of the Basic plan, everyone has the same 80% of Basic Program History coverage. In the case of the supplemental, each producer may elect between 25% and 90% of their Annual Program History. Inasmuch as the BPH is unlikely to equal the APH, it will generally be true that farmers who elect the supplemental will get paid on different amounts of milk under these two programs.

Conditions that will trigger a payment are calculated in 2-month intervals, wherein the calendar year is divided into 6 periods consisting of consecutive pairs of months: Jan/Feb, Mar/Apr, May/Jun, Jul/Aug, Sep/Oct, Nov/Dec. When a payment is triggered, farmers will receive a compensating indemnity payment on 1/6 of the applicable percentage of their applicable base. No matter how grim a single month may get, if the 2-month average doesn't hit a trigger, there will be no payment.

The Act does not specify a particular timetable for payment, but it is reasonable to expect that payment would be as soon as is practicable and relatively prompt. Inasmuch as all payments are based on numbers that are collected before a payment action is announced (coverage level and base marketings), USDA would not have to wait for any new data or action on the part of a producers.

Both programs 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.

The Basic Production Margin Protection Plan

Eligibility

Every farmer, in every State and U.S. territory or possession (yes, Hawaii, Puerto Rico, Guam) is eligible for the DPMPP, but any farmer who wants to participate must enroll in the program. USDA will develop and announce rules for doing so within the first 120 days following enactment of the Act.

Basic Production History

Every Participating Dairy Operation will be assigned a Basic Production History (BPH). For all farmers who have a complete history, the BPH will equal the highest annual marketings in the three preceding years. Thus, if this Act really did go into effect in October 2012, the base would be the highest of 2009, 2010, and 2011. If it goes into effect on or after January 2013, the 2009 is dropped and 2012 is added.

USDA will likely develop a regulation for Dairy Operations that have at least one full year but not three full years. New entrants, presumably with less than one year of history, are specifically mentioned in the Act and will be able to choose one of two ways to extrapolate their available production history to a 12-month equivalent.

The Basic Production History will be divided by 6 to determine the amount of milk associated with each of the 6 consecutive 2-month periods that define payment periods and correspond to the action triggers. No dairy farm has actual marketings that are equal in consecutive 2-month periods, although some come fairly close to level milk production. Moreover, even level daily milk production does not equate to level month milk production. February has 10% fewer days than the months having 31 days. January and February's 59 days are 5% less than July and August's 62. This could result in some patterns in the share of actual marketings covered that will surprise producers.⁶

The Basic Production History is permanent for the life of the program, i.e., through 2017.

BPH is transferable when the Dairy Operation is sold. There are very specific provisions for multiple owners, multiple farms, and other details.

Coverage Level

The coverage level for the Basic plan is \$4 per cwt. That is, whenever the 2-month average for the Actual Dairy Production Margin falls below \$4, participating farms will receive an indemnity payment that pays the difference on 80% of one-sixth of the BPH.

Administrative Fee

There are no premiums for the Basic plan, in the sense of so many \$/cwt for the amount of milk covered. However, participants must pay an Administrative Fee that is tied to their Actual Milk Marketings in the previous year. Note that the determination of an operation's BPH has nothing to do with the fee. For most operations, this probably won't matter, but for those who operate at the edge of a fee category, it is last year's actual marketings that will determine which fee is paid. The fee structure is listed in the following table.

Million Pounds Marketed per Year	Fee (\$)	Herd Size at 20,000 lbs/cow
Actual < 1	\$100	<50
1 ≤ Actual < 5	\$250	50-250
5 ≤ Actual < 10	\$350	250-500
10 ≤ Actual < 40	\$1000	500-2000
Actual ≥ 40	\$2500	≥2000

⁶ It is possible that USDA would determine the average daily BPH and multiply by the total number of days in the consecutive pair of months.

The Act allows USDA to waive the fee for farms it identifies as Limited Resource Dairy Operations.⁷

Fee revenue will accrue to USDA and may be used to offset administrative costs incurred by FSA and, possibly, NASS and or AMS (which has responsibility for some price reporting and auditing).

Payments

As noted above, the basic payment occurs whenever the ADPM (margin) for one of the six 2-month periods falls below the threshold of \$4 per cwt. The amount of milk to which this payment applies depends on how actual marketings for that 2-month period compare to 1/6 of the BPH (base).

If actual marketings are greater than 1/6 of the base, then the operation receives a payment on 80% of 1/6 of the base.

If actual marketings are less than the 1/6 of the base, then the operation receives a payment on 80% of the actual.

In addition to the issue of calendar composition mentioned above, most farms have seasonality in their milk production, with more production in the late Winter or early Spring and less production in the late Summer or Fall. Thus, it is quite possible that such farms could be paid on the basis of their BPH in the first few 2-month periods but paid on their actual marketings in the last few 2-month periods.

The Supplemental Margin Protection Plan

Eligibility

Any producer who participates in the Basic Margin Protection Plan may participate in a Supplemental Margin Protection Plan.

Producers may elect to participate, or not participate, in the Supplemental Plan in any calendar year. A year can be skipped without prejudicing enrollment in a future year.

Annual Production History

The Base on which payments will be made is different from the Basic Production History. The Annual Production History (APH) is determined by actual milk marketings in the previous calendar year. Thus, the payment base changes every calendar year. Like BPH, the APH is divided by 6 to determine the payment base for each of the six 2-month payment periods.

New entrants are treated the same as they are for the BPH, extrapolating an annual equivalent from available, partial year marketings.

APH is also transferable.

⁷ The Economic Research Service defines Limited-resource farms as follows: Any small farm with (1) gross sales of less than \$100,000, (2) total farm assets of less than \$150,000, and (3) total operator household income of less than \$20,000. Limited-resource farmers report farming, a nonfarm occupation, or retirement as their major occupation. Whether this is precisely the definition that USDA would use for these purposes is unknown until FSA writes the rules.

Coverage Levels and Premiums

Farmers may elect supplemental margin coverage in 50¢/cwt increments up to \$8 per cwt. The general concept is the same as for the Basic plan. If the ADPM (national benchmark margin) for any 2-month period falls below a producer's supplemental coverage amount, the difference will be paid on a portion of their APH. However, there are a couple of technical differences compared to the Basic plan.

In addition to the fact that the payment base is different (APH vs. BPH), the producer can elect to cover a share of the payment base that ranges from 25 percent to 90 percent. In the case of the Basic Plan, the share of the base is fixed at 80%. Of course, for most farms 80% of the highest year in the previous three will likely equal some allowed percentage of the actual marketings in the year previous to the supplemental sign up, but as a general rule, farmers will be paid on a different amount of milk for the Supplemental than they will for the Basic. In most cases, this amount could be greater or less than the Basic payment base. At 25% of the APH, it could be considerably less than 80% of the BPH.

One reason for allowing this is to help farmers control how much money they want to spend on achieving higher level of margin risk protection. This is because farmers will have to pay a per cwt premium for Supplemental coverage.

Premiums are structured at a lower level for the first 4 million pounds per year of APH marketings and at a higher level for amounts of APH covered in excess of 4 million pounds. This is before an allowance is made for the percentage of APH that is covered (25-90%). The rates are provided in the following table.

Supplemental Coverage Value in \$/cwt of APH marketings	Senate Tier 1 Premium	Senate Tier 2 Premium
	≤ 4 M lbs APH	>4 M lbs APH
	<i>(\$/Cwt)</i>	<i>(\$/Cwt)</i>
\$4.50	\$0.010	\$0.020
\$5.00	\$0.020	\$0.040
\$5.50	\$0.035	\$0.100
\$6.00	\$0.045	\$0.150
\$6.50	\$0.090	\$0.290
\$7.00	\$0.400	\$0.620
\$7.50	\$0.600	\$0.830
\$8.00	\$0.950	\$1.060

For operations whose APH exceeds 4 million pounds of milk, they would be charged the lower rate on the first 4 million pounds and the higher rate on amounts above that. Once this value is determined, the base percentage that they elected – 25 to 90 percent – is applied to determine the total premium due.⁸

⁸ *The Bill does not specify what may or may not happen to the premium revenue collected by USDA. Conceptually is available to offset the cost of any indemnities paid out under the program. While it may be that these revenues would literally be held in an account by USDA, the fact is that indemnities are in effect mandatory payments that would be made from U.S Treasury funds, the same as MILC, DPPSP, or any other non-insurance safety net program.*

The timing and manner for premium payments is something that USDA would have to develop when it promulgates specific rules. The Act simply instructs USDA to provide more than one method and to use methods that "maximizes dairy operation payment flexibility and program integrity".

Payments

Like the Basic plan, if the average ADPM (margin) for a 2-month period falls below the Supplemental coverage level selected by a producer, that producer would receive a payment on the percentage of his APH for which he contracted. The calculation of the payment depends on whether the ADPM is less than \$4, i.e., whether the Basic plan is also triggered.

When the Basic plan is also activated, the producer get two payments, the basic payment on the basic payment base times the difference between the ADPM and \$4 and a supplemental payment on the supplemental annual payment base and the difference between the supplemental coverage value and \$4.

If the ADPM is \$4 or higher, then the calculation of the supplemental benefit is simply made using the difference between the coverage level value and the ADPM.

There is also the matter of how actual marketings for the 2-month period relate to the payment base, which is an issue for both programs. If actual marketings are less than 1/6 of the APH, then payment will be made using the actual marketings. As was noted with the Basic plan, producers who experience seasonal differences in their marketings may well find that APH marketings are used in the high seasonal period and actual marketings are used in the low seasonal period.

The Dairy Market Stabilization Plan (DMSP)

The Dairy Market Stabilization Plan (DMSP) uses some of the underlying structure of the DPMPP, including the ADPM (margin), a production history, and 2-month periods; however there are some subtle differences that can be confusing. The basic concept of the DMSP is to cause farmers whose actual marketings exceed their base marketings to receive a lower payment. The so-called payment reductions are intended to have one or both of two basic effects, either of which should result in a higher future farm price for milk than would otherwise have occurred.

The immediate effect of activating the DMSP is to require handlers to reduce payments to producers who exceed their base marketings by certain amounts, which vary with market conditions. In this case, milk would be delivered, so there would be no impact on supply, the amount of milk delivered and the price of that milk. However, handlers would be required to pay the USDA for the value of the payment reduction to farmers. In essence, handlers would keep all the milk they receive but the price of some portion of that milk would be paid to USDA, not the supplier. To the extent USDA receives this money, it is instructed to use the revenue to enhance demand. This will be discussed more fully in a following section, but the point here is to highlight that it the demand effect that is expected to cause higher farm prices, under this circumstance.

Whereas the DPMPP authorizes payments to producers for a previous 2-month period in which margins were low, the DMSP authorizes reductions in payments to producers for marketings in the next month. As such, it is possible that a farmer may choose not to deliver

all or some of the milk for which he knows he would not receive payment. In this case, the supply of milk is altered. Some milk that would have been delivered is not. Handlers don't have to pay farmers for it because they never received it, and of course they also don't have to pay USDA for it. USDA receives no (additional) money that they can use for demand stimulation. In this circumstance it is the supply effect that is expected to cause an increase in the farm price of milk.

Just as there are conditions that trigger the announcement of a DMSP action (entry trigger), there are triggers to determine the termination of a DMSP action (exit trigger). Once a DMSP action is terminated, a new program cannot be announced until 2 months have passed. The definition of entry and exit triggers is also explained more fully below.

Effective Date and Specific Rules

As with the DPMPP, the Dairy Market Stabilization Plan must take effect no later than 120 days after enactment. Also, USDA would have to write rules to fully cover how the program would work.

Eligibility

As noted above, any producer who signs up to participate in the DPMPP is automatically susceptible to the provisions of the DMSP. There are no circumstances or conditions whereby a producer would be required to participate in DMSP outside of the DPMPP. If DPMPP is transferred to a new owner, the new owner automatically becomes subject to the DMSP.

Stabilization Program Base

At the time that a producer enrolls in the DPMPP, he must inform USDA which of two methods he will choose to determine his Stabilization Program Base (SPB). He will be allowed to change the method and hence his base at the beginning of each new year. The two methods are as follows:

1. The average volume of actual monthly milk marketings for the 3 months immediately preceding the month in which a DMSP action becomes effective. Thus, if the DMSP is announced to take effect in, say, May, then the base period would be February, March, and April. Presumably the base would be the actual marketings in these 3 months divided by 3.⁹
2. The volume of actual monthly milk marketings in the previous year for the month corresponding to the month in which a DMSP action becomes effective.¹⁰

⁹ Calendar composition can make a fairly significant difference in determining a base and how that base relates to a following month. Essentially, any time a February is involved, marketings are less because of the simple fact that cows produce milk every day but there are fewer days in February. While this may seem like a small matter, the simple arithmetic is that 28 is 9.7% less than 31. If the same amount of milk is produced every day from 1 February to 31 May, then May marketings would exceed the average 3-month base for February through April by 3.3%. This is the extreme example of the possible effect of calendar composition, but remember the 3.3% occurs despite the fact that we assume no change in daily marketings.

¹⁰ Calendar composition can also come into play here, in the case of when either the base or the announcement year is a February during a leap year.

Note that in the case of the 3-month average, the base is based on months that have already occurred. In the case of the year over year option, the month used is the month following the announcement.

Action Triggers

The Act refers to "thresholds" at which a DMSP action can be initiated or terminated. We will refer to them as Entry Triggers and Exit Triggers. Entry and Exit can be triggered by ADPM (margins). This is exactly the same margin measure that is used for the DPMPP. The relationship between the US wholesale price for cheddar cheese or nonfat dry milk and corresponding "world" prices can trigger an exit or prevent entry.

Entry Triggers

There are two circumstances that could lead to the announcement of reductions in payments under DMSP.

1. If the ADPM (margin) for any two consecutive months is equal to or less than \$6 per cwt OR
2. If the ADPM for any single month is equal to or less than \$4/cwt.

If either of these occurs, USDA is obliged to announce that payment reductions will be in effect beginning on the first day of the next month.

Keep in mind that the 2-month period refers to any two consecutive months: Jan/Feb, Feb/Mar, Mar/Apr and so on. Also, keep in mind that the margin condition must apply to each month individually, not the average of the two. In this sense, the familiar principle of "the higher of" comes into play. It is the higher of the two consecutive months that will determine if an action occurs.

Given the difference in how two consecutive months must be interpreted between the two programs and the fact that DPMPP uses an average and DMSP uses the higher of, the same sequence of margins could result in different programs being triggered.

Consider the following table of hypothetical margins and months.

Month	ADPM	2-month ave.	DPMPP @ \$6/cwt	DMSP
DEC	\$6.50			
JAN	\$6.10	\$6.30	yes	no
FEB	\$5.80	\$5.95	yes	no
MAR	\$5.80	\$5.80	yes	yes
APR	\$5.80	\$5.80	yes	yes
MAY	\$5.80	\$5.80	no	yes
JUN	\$6.25	6.025		no

Although these numbers are simply hypothetical examples, the margins are not contrived in some unbelievable pattern. The table illustrates that by virtue of the months in which a margin falls and its magnitude, there could be months in which DPMPP paid an

indemnity for a \$6 per cwt supplemental, yet there would be no DMSP reduction. There could be months when both programs were in play. There could be months where DMSP was effective but there was no indemnity payment at the \$6 rate.

Intervention Trigger

The World price exit trigger is described in the next section, but let us mention here that if this exit trigger exists simultaneously with the entry trigger, i.e., both market conditions exist, USDA is allowed to do one of three things:

1. Suspend activation of the DMSP, i.e., never announce it in the first place
2. Suspend a DMSP that has been in effect, i.e., terminate it even though the Entry Trigger is still effective
3. Go ahead and implement the program

Exit Trigger

There are two conditions under which a DMSP action must be terminated. One is if margins improve; the other is if US prices for two basic dairy commodities exceed world prices by certain relative amounts.

Exit Trigger 1: ADPM is greater than \$6 per cwt for a 2-month period

Exit Trigger 2: ADPM is greater than \$5 but less than or equal to \$6 for a 2-month period

AND

The wholesale price of cheddar cheese in the US is greater than or equal to the World price for that product OR the wholesale price of nonfat dry milk in the US is greater than or equal to the World price for skim milk powder.

Exit Trigger 3: ADPM is greater than \$4 but less than or equal to \$5 for a 2-month period

AND

The wholesale price of cheddar cheese in the US is greater than or equal to the World price for that product times 1.05 OR the wholesale price of nonfat dry milk in the US is greater than or equal to the World price for skim milk powder times 1.05.

Exit Trigger 4: ADPM is less than \$4 for a 2-month period

AND

The wholesale price of cheddar cheese in the US is greater than or equal to the World price for that product times 1.07 OR the wholesale price of nonfat dry milk in the US is greater than or equal to the World price for skim milk powder times 1.07.

If any one of these conditions exists, the Secretary must terminate the DMSP the day after this determination is announced. Essentially, it becomes effective immediately. As noted earlier, a new DSMP program may not be activated until 2 months have passed.

Obviously, the logic of this 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 US dairy exports, exit triggers are arranged to terminate the program when the US price gets too high relative to the World price.

There are at least three fairly arbitrary decisions to be made in this regard:

1. What products?
2. What prices?
3. How high is too high?

The Act specifies that either of two products could trigger termination: cheddar cheese and nonfat dry milk. This is fairly easy to understand. Both products represent large shares of US milk utilization and play an important role in farm milk price determination. Also, both represent a fairly large share of total exports. However, it is certainly true that there are other dairy products one might have considered, chiefly butter and whey products.

Cheddar cheese is the most popular style of cheese that is in common use around the world. Although there are certainly differences in US cheddar and cheddar made in the UK, Australia, and elsewhere, it is a product about which one can identify standard characteristics and common price points.

Nonfat dry milk (NDM) is made by simply drying natural skim milk, cow's milk from which the cream has been separated by simple centrifugal removal. This is a very common product in the US. The rest of the world more commonly uses a product called Skim Milk Powder (SMP). The difference is more than just semantics. SMP starts with natural skim milk, but it is formulated to a constant protein standard. Normal cow's milk exhibits a range of protein contents. SMP is formulated to deliver to buyers a dried milk product that has the same protein content in every batch. The protein standard is at the low end of natural cows milk. The typical standardization technique is to add lactose, sugar from milk, to the skim milk. The end result is a powdery substance that doesn't look any different from NDM but which has a different nutrient profile. Depending on a user's preference for protein vs. lactose, NDM could be priced differently for the same amount of SMP.

The prices to be used for these products are not tightly defined. There are a number of data series that could be described as a US cheddar cheese or NDM price. Most likely, USDA would choose to use the prices reported by AMS under their mandatory price reporting rule, and which are used to determine minimum prices under Federal Milk Marketing Orders. The estimation of a "World" price is much less simple. As a general construct, one might imagine the world price of cheddar cheese to be the average price paid by wholesale buyers around the planet for something called cheddar cheese. There is no such data.

Cheddar cheese that is more or less similar to the Cheddar cheese produced in the US is made in the UK, Ireland, Australia and New Zealand. The Agricultural Marketing Service of USDA, through its international Market News service, estimates market prices for cheddar cheese sold by Australian or New Zealand manufacturers to foreign buyers. This is not a rigorous statistical survey. Foreign buyers or manufacturers have no obligation to report their

prices to USDA. A similar report is made for SMP produced in Oceania or Western Europe. The New Zealand dairy cooperative Fonterra also organizes a twice monthly auction of certain dairy products under the GlobalDairyTrade platform. Cheddar cheese (and SMP) is traded in this auction and prices are publicly reported. It is not clear what prices USDA would use. It is perhaps expected that they would use the prices reported by AMS, but this is not specifically required.

Reduction Requirements

The Act refers to payment penalties for producers whose marketings exceed their base as a payment reduction. It defines three levels of "reduction requirements". Producers are exempt from a reduction if their actual marketings are less than the percentages of SPB (base) specified below, ranging from 92% to 98%. Note that this means that any producers whose actual marketings exceed 98% of his SPB will be susceptible to payment reductions.

Reduction Requirement #1

If $\$5 < \text{ADPM} < \6 , then the handler pays each farmer whichever payment of the following is larger:

1. 98% of the SPB
2. 94% of the actual monthly marketings.

The SPB payment will be larger when actual monthly marketings are no more than 4.25% larger than the base.

Reduction Requirement #2

If $\$4 < \text{ADPM} < \5 , then the handler pays each farmer whichever payment of the following is larger:

1. 97% of the SPB
2. 93% of the actual monthly marketings.

The SPB payment will be larger when actual monthly marketings are no more than 4.30% larger than the base.¹¹

Reduction Requirement #3

If $\text{ADPM} \leq \$4$, then the handler pays each farmer whichever payment of the following is larger:

1. 96% of the SPB
2. 92% of the actual monthly marketings.

The SPB payment will be larger when actual monthly marketings are no more than 4.35% larger than the base.

Exemption from Reduction

¹¹ As written, the Act seems to exclude the possibility of the margin being exactly equal to \$5. Although this isn't a very likely event, the language for Reduction Requirement 2 should probably read "less than or equal to \$5."

As noted above, producers are exempt if their actual marketings are less than or equal to 98%, 97%, or 96% of the SPB, corresponding to the margin scenarios.

Payments to USDA

Any amounts of milk received by handlers for which they are required to withhold payments to producers will be valued at the same price each producer was paid for their allowed amount of milk. This value will be paid instead to USDA.

Within 90 days of receiving this revenue USDA must obligate the funds for one or both of two purposes.

1. To purchase dairy products for donation to Food Banks or other programs the Secretary deems appropriate (presumably other food donation or assistance programs)
2. To expand consumption and build demand for dairy product, but not to duplicate the efforts of the National Dairy Board or its approved affiliates.

The former provides an arguably good use for dairy products but its impact on demand and price is not entirely clear. If these donations are strictly additive to total dairy usage then the amount of dairy products served in Food Banks or other settings is increased. If the donation displaces purchases that would have been made with other cash resources, then total sales of dairy products would actually decline. If the increased availability of dairy products in certain settings, for example, school feeding programs actually increased consumer preferences for dairy products, total demand could increase. Both the nature and timing of any of these effects is hard to estimate.

If USDA engaged in some new demand building program, not already supported by existing government authorized promotion programs, then it is conceivable that total demand would be enhanced. Just what that would be, how well it would work, and when it would work is also hard to estimate.

Summary

The Act passed by the Senate agriculture committee has yet to be approved by the full Senate, much less agreed to by the House and approved by the President. There is a good deal that must yet happen before any of this becomes real for the US dairy industry. On the other hand, this Act represent yet one more step down the road for a set of programs developed by the National Milk Producers Federation, beginning in 2009.

The proposed Act offers a total revamping of the safety nets that have been in place for the dairy sector going back to the middle of the 20th Century. The DPMPP might be considered a variation of the countercyclical payments (MILC) that began in 2002, but it is notable because it substitutes Milk Returns Over Feed Costs for farm price as the measure by which we economically evaluate and support dairy farms. The DMSP introduces an ongoing program by which the government discriminates on how much an individual farmer gets paid for milk, based on how much milk is marketed relative to a base, generally referred to as a supply control. The 1980s Milk Diversion and Dairy Termination programs could be described as kinds of a supply control, but those two programs differed in two important ways. First, they were designed to be temporary. Farmers decided to participate or not, took what action was required, and then the program expired. Second, both programs rewarded farmers for cutting back. The DMSP punishes farmers for increasing 4.25% or more (when margins are low).

Advocates of this new approach argue that the limitations of existing programs were vividly revealed during the horrible economic events of 2009. Hence, bold new programs are needed. Whether the programs proposed here will prove to be the answer farmers seek is something that we can try to estimate but won't really know unless and until they are tried.