AgriBank INSIGHTS

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Inside the Dairy Margin Protection Program

2014 FARM BILL PROVIDES NEW RISK MANAGEMENT TOOL FOR DAIRY FARMERS

AgriThought

AgriBank provides financial solutions to meet the needs of production agriculture in America's heartland. We feature our research and analysis in AgriBank Insights as part of our AgriThought initiative to help inform the financial decisions among those we serve.

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The Agricultural Act of 2014, also known as the Farm Bill, ushered in major changes to the dairy programs contained in Subtitle D. These represent a shift toward programs that look similar to the traditional crop and revenue insurance programs contained in Title XI. The centerpiece is a new Dairy Margin Protection Program (DMPP) for producers. It's intended to protect against falling milk prices, rising feed prices, or a combination of both. This report provides an overview of key dairy program changes plus details and an example of the new DMPP.

Highlights

- **DAIRY MARGIN PROTECTION PROGRAM (DMPP).** Dairy producers can enroll in new standardized margin protection coverage that makes a payment based on the producer's chosen coverage level. The payment is equal to the difference between the coverage level and the standardized milk margin over feed costs (called Actual Dairy Production Margin, or ADPM) when the margin falls below the producer's elected coverage level.

- **DAIRY PRODUCT DONATION PROGRAM.** This is another new program, also part of Subtitle D, which requires the Secretary of Agriculture to implement the program whenever the ADPM falls below $4 per hundredweight. Under this program, the USDA would purchase dairy products for distribution to food banks and other donation programs. The USDA is prohibited from paying for storage of these products, and the organizations receiving these products must agree to not resell them into commercial channels.

- **OTHER DAIRY PROGRAMS.** Subtitle D effectively ended the Milk Income Loss Contract (MILC) Program on September 1, 2014. Other programs repealed under Subtitle D are the Dairy Product Price Support Program, the Dairy Export Incentive Program and the Federal Order Review Commission. Extended and reauthorized under Subtitle D are the Dairy Forward Pricing Program, the Dairy Indemnity Program, and the Dairy Promotion and Research Program.

Details of the Dairy Margin Protection Program (DMPP)

The DMPP is administered by the Farm Service Agency (FSA) of the USDA and is authorized through December 31, 2018. Producers who elect to enroll their dairy herd in the DMPP may not simultaneously participate in the Livestock Gross Margin (LGM-Dairy) insurance program for the same dairy herd. Likewise, a producer who has existing coverage in LGM-Dairy may not enroll the same herd for coverage in the DMPP until the LGM-Dairy coverage period has ended.

Establishing Actual Dairy Product History

Producers who choose to participate in the program must establish an Actual Dairy Production History (ADPH) for each of their enrolled dairy herds. The ADPH is equal to the highest production level recorded in either 2011, 2012 or 2013. For new dairy operations (in operation for less than one year), the ADPH is set by either:

- Extrapolating existing monthly production levels to an annual level, or
- Estimating the actual milk marketings based upon the herd size of the operation relative to the national rolling herd average data published by the USDA

In each subsequent year, the ADPH for each operation is adjusted by the percentage change in annual U.S. aggregate milk production reported by the USDA.

Producers may enroll a dairy herd in the DMPP and must pay a $100 per year enrollment fee to the USDA for each year of participation in the program. Coverage is offered between 25 and 90 percent of the ADPH in 5 percent increments. Margins are protected in six two-month “buckets” during the year (January-February, March-April, May-June, July-August, September-October, and November-December), with 1/6 of the annual elected coverage (coverage percent x ADPH) assigned to each bucket.

DMPP Signup Closes November 28, 2014

Signup for the Dairy Margin Protection Program began September 2, 2014, and continues through November 28, 2014. Producers can register for coverage in the last four months of 2014, as well as for all of calendar year 2015. Once enrolled, a producer is committed to be in the program each year until the expiration of the 2014 Farm Bill in 2018. However, a producer can adjust the coverage — both the milk volume and the margin level — annually. Starting in 2015, signup will be between July 1 and September 30.

The Actual Dairy Production Margin (ADPM) is equal to an average milk price minus an average feed cost on a per hundredweight of milk production basis. The NASS "All Milk" price received by producers (as published in the milk-feed price ratio section of the monthly USDA Agricultural Prices Report) is used as the milk price. The feed cost formula utilizes the national NASS corn and alfalfa hay prices (also reported in the same section of the monthly Agricultural Prices Report) and the Central Illinois soybean meal price reported by the Agricultural Marketing Service in the Market News – Monthly Soybean Meal Price Report. The feed cost (per cwt of milk production) is calculated as:

1.0728 X CORN PRICE + 0.00735 X SOYMEAL PRICE + 0.0137 X ALFALFA HAY PRICE

The ADPM for each two-month "bucket" is the simple arithmetic average of the margins for the two months.

Producers may elect margin coverage levels between $4.00 and $8.00 per hundredweight in 50 cent increments. The lowest level of coverage ($4.00) is offered for no premium; however, producers must still pay the $100 per enrolled herd administration fee. Higher levels of coverage ($4.50 through $8.00) are offered on a two-tier fixed premium schedule. Their first tier ("Tier 1") covers the first 4 million pounds of milk (per operation) covered under the program. Based on 2013 average U.S. milk production per cow, Tier 1 would cover the annual production of a 183-cow dairy herd. The second tier ("Tier 2") covers all milk production (per operation) above 4 million pounds. No limit is placed on the amount of milk production that can be enrolled (besides the ADPH and maximum coverage percentage), and the program has no payment limitations.

Table 1 shows the two-tier premium schedule for the DMPP. Note that the premiums for Tier 1 coverage for the 2014 and 2015 calendar years are discounted by 25 percent, with the exception of the $8.00 coverage level. Also note that the premium structure is fixed in the legislation and does not change during the life of the program (unlike the Title XI insurance programs for which premiums are calculated using actuarial formulas that change with production history and market conditions).

TABLE 1: Premium Schedule for Dairy Margin Protection Program

	PREMIUM PER HUNDREDWEIGHT OF COVERED PRODUCTION	
COVERAGE LEVEL*	UP TO 4 MILLION POUNDS**	OVER 4 MILLION POUNDS
$4.00	Free	Free
$4.50	$0.010	$0.020
$5.00	$0.025	$0.040
$5.50	$0.040	$0.100
$6.00	$0.055	$0.155
$6.50	$0.090	$0.290
$7.00	$0.217	$0.830
$7.50	$0.300	$1.060
$8.00	$0.475	$1.360

**Payment if milk margin falls below coverage level*

***Premium reduced 25% for 2014 and 2015 except for $8 coverage level*

Dairy Margin Protection Program: An Example

Suppose a dairy producer wants to enroll his dairy operation into the DMPP for 2015. His established Actual Dairy Production History for the year is 8.144 million pounds based on his 2013 production level of 8.0 million pounds and the 1.8 percent growth in 2014 national milk production. He chooses to enroll at the 55 percent coverage level, with a coverage margin of $6.00 per cwt.

Therefore, his enrolled production is 4,479,200 pounds (8,144,000 x 0.55) or 44,792 cwt. His production subject to the Tier 1 premium is 40,000 cwt and for the Tier 2 premium is 4,792 cwt (44,792 – 40,000). Under the fixed premium schedule in the Title D legislation, the $6.00 coverage level has a Tier 1 premium of 5.5 cents per cwt and Tier 2 has a 15.5 cent premium. However, since it is 2015 and the coverage level is less than $8.00, the Tier 1 premium is discounted by 25 percent and is equal to 4.13 cents per cwt. Therefore, his total premium is as follows:

	TIER 1 TOTAL PREMIUM	**$1,650.00**	**= 40,000 CWT X $0.0413 PER CWT**
+	**TIER 2 TOTAL PREMIUM**	**$742.46**	**= 4,792 CWT X $0.155 PER CWT**
+	**ADMINISTRATION FEE**	**$100.00**	
=	***TOTAL COST***	***$2,492.76***	

Assuming that 2015 has the same price (and margin pattern) as 2013 results in the indemnity pattern illustrated in Table 2. Each two-month bucket is allocated 1/6 of the annual 44,792 cwt coverage, or 7,465.33 cwt per bucket. Three of the buckets had margins below the $6.00 coverage level (March-April, May-June, and July-August) for a total gross indemnity of $7,947.56 for the calendar year. Subtracting the total premium and administration cost of $2,492.76 results in a net indemnity of $5,454.80 for the total operation or $0.1218 per cwt of enrolled production.

TABLE 2: Dairy MIPP Coverage Example

COVERAGE PERIOD		ENROLLED PROD (CWT)	COVERAGE	ADPM	PER CWT	TOTAL INDEMNITY
Jan	Feb	7,465.33	$6.00	$6.01	$0.00	$ -
Mar	Apr	7,465.33	$6.00	$5.61	$0.39	$2,944.45
May	June	7,465.33	$6.00	$5.56	$0.44	$3,250.67
July	Aug	7,465.33	$6.00	$5.77	$0.23	$1,752.44
Sep	Oct	7,465.33	$6.00	$8.91	$0.00	$ -
Nov	Dec	7,465.33	$6.00	$9.98	$0.00	$ -
Total Indemnity						**$7,947.56**
Total Cost						**$2,492.76**
Net Total Indemnity						**$5,454.80**
Net Indemnity per Enrolled Cwt						**$0.1218**

DMPP vs. Livestock Gross Margin Program

The Livestock Gross Margin program for dairy still will be available under the 2014 Farm Bill and, like most Title XI programs, is unchanged in its basic provisions. Producers who choose DMPP must forego LGM coverage, while producers who choose LGM must forego DMPP coverage – they cannot have both coverages in place at the same time.

Table 3 on page 6 contains a side-by-side comparison of the major features of both programs. One major difference between the two programs concerns the prices used to set the coverage. The DMPP uses monthly average USDA NASS and AMS values, while LGM utilizes CME futures prices with a state-level basis adjustment for the milk price, and a more customized ration formula (converted to corn and soymeal equivalents). Therefore, one can view the LGM coverage prices as more customized to the producer's particular situation.

Also, the par coverage level on LGM is based on projected monthly margins implied by the futures prices rather than an arbitrary level (as with DMPP). The premiums on LGM will adjust based on projected market conditions (using the option implied volatilities to measure risk). Another feature of LGM is that the annual production plan is adjusted to accommodate any expansion of the dairy herd, while the DMPP treats the herd size as fixed through 2018, with the only expansion related to the increase in U.S. milk production.

Related to using the NASS and AMS values in DMPP as a hedge to AgriBank District milk and feed prices, the coverage still should match very well to most situations. From January 1995 to December 2013, the AgriBank average all-milk price has a rank-order correlation of 99.4 percent with the NASS national average price. For individual states in the District that report monthly milk prices, the correlations range from a low of 96.9 percent to a high of 98.9 percent. The AgriBank District has an average "basis" relative to the national NASS milk price of $0.63 per cwt premium. For corn, the AgriBank District has an average correlation of 99.8 percent with the national NASS average price, with state ranges from a low of 98.8 percent to a high of 99.8 percent. The AgriBank District has an average basis relative to the national NASS corn price equal to an average premium of 0.58 cents per bushel.

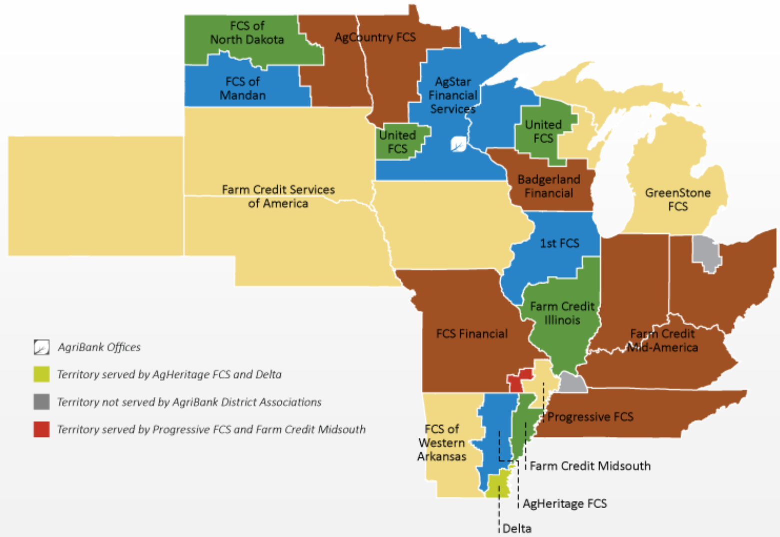
TABLE 3: Dairy MPP and LGM Comparison Matrix

FEATURE	DAIRY MARGIN PROTECTION PROGRAM (DMPP)	DAIRY LIVESTOCK GROSS MARGIN INSURANCE (LGM)
Administered and Offered By	USDA Farm Service Agency (FSA)	USDA Risk Management Agency (RMA) through participating private crop insurance providers.
Producer Limits	Payment - no payment limitations or eligibility constraints since under Dairy Title of Farm Bill. Production - between 25 and 90 percent of producer's Actual Dairy Production History (ADPH) per year.	Payment - no limits since under Crop Insurance Title of Farm Bill. Production - no minimum. Maximum - 24 million pounds per marketing year.
Coverage Time Periods	Calendar year with indemnities calculated in six consecutive two-month time buckets per year (Jan-Feb, Mar-Apr, May-June, Jul-Aug, Sep-Oct, and Nov-Dec) with 1/6 of producer's annual coverage allocated to each bucket.	Signup each month on last Friday of month. Coverage starts one month following signup for 11 consecutive months. Coverage allocated into monthly buckets based upon producer's target marketing and feed plans filed with insurance provider.
Prices Used	USDA National Agricultural Statistics Service (NASS) all-milk, corn and alfalfa hay prices. USDA Agricultural Marketing Service (AMS) Central Illinois soybean meal price. All prices reported as monthly averages. No basis adjustments on prices.	CME Class III milk futures price with state-level basis adjustment for milk price. CME corn and soybean meal futures prices for feed cost. For non-delivery months (corn and soymeal), use weighted average of surrounding delivery months. For expected prices, use average for three days prior to signup deadline date. For settlement, use three days prior to expiration.
Feed Cost Formula	Use standard ration formula using corn, soybean meal, and alfalfa hay priced using USDA NASS and AMS values.	Producer submits ration in target feed plan. Standard table used to convert ration into corn and soybean meal equivalents which are priced using CME corn and soybean meal futures.
Coverage Levels and Premiums	Coverage offered for margins between \$4.00 and \$8.00 in \$0.50 per cwt increments. Premium schedule fixed in legislation through 2018 (see Table 1). Coverage level is same for each two-month time bucket during calendar year. Producer can change coverage level each year.	Par coverage is set at expected margins for each of the 11 consecutive months using expected prices just prior to signup. Producer can select deductibles ranging for \$0 to \$2 per cwt in \$0.10 per cwt increments. Premium continuously adjusted based upon market-based actuarial formula that takes into account deductible level.
Production Levels	For dairy producer, the Actual Dairy Production History (ADPH) level is equal to the highest annual production in either 2011, 2012 or 2013. For new producers, ADPH is established either by extrapolating monthly production to annual or by multiplying herd size by national average production per cow. ADPH adjusted annually by applying national milk production percentage growth to previous year's ADPH. Producer can insure between 25% to 90% (in 5% intervals each year).	Producer can choose between 0% and 100% of maximum approved target marketings in each month. Approved target marketings are certified by the producer and are equal to the lesser of the capacity of the dairy operation over the 11-month insurance period (as determined by insurance provider) and the underwriting capacity limit as stated in the special provisions. Actual revenue based upon actual milk marketings during coverage month although feed ration amounts stay the same as in the target feeding plan for determining actual margin.

Summary

The DMPP represents a major policy change in the 2014 Farm Bill and will prove to be a valuable risk management tool for AgriBank District dairy producers. According to additional AgriBank analysis, the program historically would have had an average payout that exceeds the premium for most levels of coverage. In the near future, it appears unlikely that the program will provide payments in 2014 but possible it will do so in 2015. For 2016 and beyond, the program should have much higher odds of making payouts, depending on market conditions.

Associations in the AgriBank District



For more information

As with other new programs in the 2014 Farm Bill, dairy producers should evaluate all of their options (including utilizing the LGM for dairy insurance program instead) using a thorough spreadsheet scenario analysis. However, unlike the Production Loss Coverage (PLC) and Agricultural Risk Coverage (ARC) programs for grain and oilseed producers, the DMPP decision can be made on an annual basis, so producers are not locked in for the long term (as with the PLC vs. ARC decision).

The USDA offers a Web tool to help producers determine the level of coverage under the DMPP that will provide them with the strongest safety net under a variety of conditions. This online resource is available at: www.fsa.usda.gov/mpptool

Additional resources are available from the National Milk Producers Federation at: www.futurefordairy.com

Local Farm Credit Associations can help producers consider how the DMPP may affect their operations. Find a local Association at www.AgriBank.com.

About AgriBank

AgriBank is one of the largest banks within the national Farm Credit System, with more than $85 billion in total assets. Under the Farm Credit System's cooperative structure, AgriBank is owned by 17 affiliated Farm Credit Associations. The AgriBank District covers America's Midwest, a 15-state area from Wyoming to Ohio and Minnesota to Arkansas. More than half of the nation's cropland is located within the AgriBank District, providing the Bank and its Association owners with exceptional expertise in production agriculture. For more information, visit www.AgriBank.com.

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