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The New Safety Net: Dairy Margin Protection Program Participation and Payouts

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Abstract

The Dairy Margin Protection Program created by the 2014 Farm Bill offers a new risk management option available for dairy producers. By “insuring” a margin between the price of milk and the cost of feed inputs, producers can have protection from declining milk prices, rising feed costs, or both. More than half of the dairies in the U.S. participated in at least the catastrophic level of coverage for 2014, which locks them into participating through 2018 when a new Farm Bill is written. Coverage level and production history enrolled can change year to year however; therefore, each year producers will be facing tough risk management decisions. Factors influencing their decision to purchase the “correct” level of coverage include operation size (due to premium structure), market outlook, risk preference, and financial position.

Keywords

MPP-Dairy, risk management, dairy margin

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The New Safety Net: Dairy Margin Protection Program Participation and Payouts

R. Reid

Summary

The Dairy Margin Protection Program created by the 2014 Farm Bill offers a new risk management option available for dairy producers. By “insuring” a margin between the price of milk and the cost of feed inputs, producers can have protection from declining milk prices, rising feed costs, or both. More than half of the dairies in the U.S. participated in at least the catastrophic level of coverage for 2014, which locks them into participating through 2018 when a new Farm Bill is written. Coverage level and production history enrolled can change year to year however; therefore, each year producers will be facing tough risk management decisions. Factors influencing their decision to purchase the “correct” level of coverage include operation size (due to premium structure), market outlook, risk preference, and financial position.

Key words: MPP-Dairy, risk management, dairy margin

Introduction

The 2014 Farm Bill marked a new era in federally sponsored safety net programs for dairy producers. Unlike previous price support programs, the Dairy Margin Protection Program (MPP-Dairy) is the first of its kind to recognize that both the price of milk and the cost of feed inputs are important to protecting producer profitability. Therefore, protecting a margin between these two would insure an adequate return to cover non-feed costs is available. Dairy producers have the option to purchase MPP-Dairy at coverage levels from \$4.00/cwt to \$8.00/cwt, depending on their risk preference and financial position. They may also choose to insure 25% to 90% of their milk production history as determined by the highest of 2011, 2012, 2013 annual milk marketings. Previous Farm Bill programs provided limited support for larger dairies, whereas the MPP program provides a two-tier cost structure but eliminates caps based on farm size or adjusted gross income. Participation in MPP-Dairy is voluntary and sign-up for the coming year occurs months before protection is realized. In this study, 2015 Dairy-MPP participation and buy-up coverage decisions are analyzed. The effectiveness of the safety net is also evaluated based on actual prices received in 2015 compared to expectations during the coverage sign-up period.

Experimental Procedures

The actual MPP-Dairy participation was evaluated using USDA-FSA state-level data published in April 2015. These data gave measures of participating dairies, their production history levels, and buy-up coverage selections.

The Actual Dairy Production Margin was tracked throughout 2015 by watching the National Agriculture Statistic Service (NASS) reported all-milk price, alfalfa hay price, corn price; and the American Marketing Service (AMS) reported soybean meal price. Thus, the drivers of the MPP margin and associated payments were evaluated.

Results

Nationally, 55% of licensed dairies enrolled in MPP-Dairy for 2015 coverage. Of those, 56% purchased coverage above the \$4.00 margin level. Figure 1 maps participation in at least the \$4.00 coverage level for each state. In general, higher enrollment occurred in states with larger size dairies.

In Kansas, 62% of licensed dairies (196 out of 315) enrolled in the program and of those 51% purchased buy-up coverage. Figure 2 shows the percentage of enrolled farms that elected each coverage level in Kansas and in the U.S. as a whole. The \$4.00 coverage carries no additional premium other than a \$100 administrative fee, so it was a popular choice for many producers; however, it offers very little price protection. The Actual Dairy Production Margin has only approached this level twice in the last 15 years. Many producers, nationally and in Kansas, chose \$6.00 or \$6.50 level margin coverage, as seen in Figure 2.

Figure 3 evaluates herd size based on FSA-determined production history, adjusted to 22,000 pounds of milk marketed per cow. Kansas's dairies show a stark difference to the U.S. averages. The \$4.00 coverage level in Kansas shows that a combination of small and large dairies selected the minimum coverage level. However, at the \$6.00 level an average herd size 1855 cows suggests many large dairies purchased this buy-up coverage level. Also, recall from Figure 2 that \$6.50 coverage was even more frequently purchased; while Figure 3 suggests with a 106-cow average that most all dairies purchasing this coverage were relatively small. Most dairy operations elected to cover the maximum of 90% of their established production history.

At the time of this article, the Actual Dairy Production Margin is only known through September 2015. Table 1 shows the dramatic decline in the margin from the end of 2014 to January of 2015. While feed costs have declined slightly, driven mostly by the price of alfalfa hay and soybean meal, the significant decline in milk price has no doubt been the demise of the margin. Unless producers had selected the \$8.00 coverage level, however, support payment would not be realized to this point. September All-Milk price shows some improvement and will likely bring the MPP-Dairy margin back up when averaged with the October margin.

Discussion

Many dairy farms opted to enroll in the Dairy-MPP program for 2014 with the predicted downturn in milk price. Figure 4 displays what the USDA sponsored

Margin Protection Program Decision Tool predicted for a 50% confidence interval on September 30, 2014, with the blue line showing the actual margin. Driven by declining milk price, the margin dropped much lower than predicted. However, few benefits were actually realized by dairy farmers because only those electing the maximum coverage of \$8.00 per cwt received payments, which were trivial. Payments for a 100 cow dairy, covering 90% of their production history at 22,000 pounds per cow would have totaled \$2,477 in the first 4 pay periods of 2015 (which includes a 7.3% decrease in payments due to budget sequestration). This dairy farm would have paid \$9,505 in premiums, netting a negative \$7,028. A 1,000 cow dairy, which would be paying higher premiums, would net -\$209,205.

Does this mean the MPP-Dairy program is a bad investment? Not necessarily. The philosophy behind the program is risk management, not payment maximization. Dairy producers need to consider their risk tolerance and willingness to pay for protection. This is reflected in the number of dairies that chose to participate in MPP-Dairy in 2015, even though the margin was predicted to stay above payment levels. Markets continue to be volatile, and even the best of predictions are still predictions.

Each year dairy farmers have the opportunity to change their coverage level and amount of production history protected. The 2016 margin is predicted to hover just above the \$8.00 level, but could certainly dip below it. For \$0.09 per cwt, \$6.50 coverage for a dairy with less than 4 million pounds of covered production history seems very reasonable. For a large dairy that would mostly pay Tier 2 premiums, \$0.10 per cwt for \$5.50 coverage is also well within a risk management budget. Ultimately the correct coverage level depends on the individual operation and its financial position. Dairy producers can access more information and decision tools by going to <http://dairy.wisc.edu/MPP>.

Table 1. Actual Dairy Production Margin calculations from the start of the Dairy MPP program

Month-year	Pay periods	Corn \$/bu	Alfalfa hay \$/ton	Soybean meal \$/ton	All milk \$/cwt	MPP feed cost	MPP margin	Milk margin/pay period
Sep-14		3.48	197	525.72	25.70	\$10.30	\$15.40371	
Oct-14	5	3.56	194	381.5	24.90	\$9.28	\$15.61901	\$15.51136
Nov-14		3.58	184	441.39	23.00	\$9.61	\$13.39436	
Dec-14	6	3.78	183	431.73	20.40	\$9.74	\$10.66450	\$12.02943
Jan-15		3.81	174	380.02	17.60	\$9.26	\$8.33569	
Feb-15	1	3.79	172	370.38	16.80	\$9.14	\$7.65540	\$7.99554
Mar-15		3.81	172	357.83	16.60	\$9.07	\$7.52618	
Apr-15	2	3.75	184	336.61	16.50	\$9.02	\$7.48212	\$7.50415
May-15		3.62	192	320.23	16.70	\$8.86	\$7.83237	
Jun-15	3	3.58	178	335.03	16.90	\$8.74	\$8.15831	\$7.99534
Jul-15		3.80	169	375.71	16.60	\$9.15	\$7.44659	
Aug-15	4	3.68	159	357.85	16.70	\$8.76	\$9.94360	\$7.69510
Sept-15	5	3.68	157	333.62	17.50	\$8.55	\$8.94909	

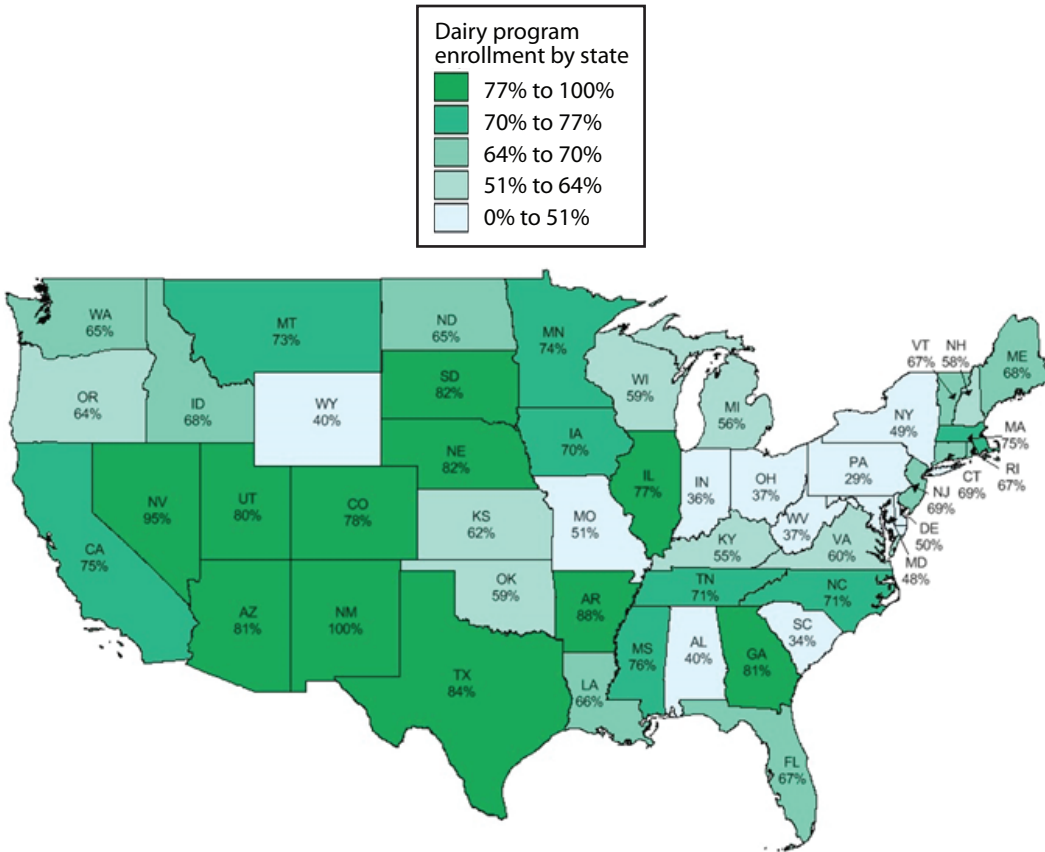


Figure 1. Dairy-MPP participation in 2015 across the United States.

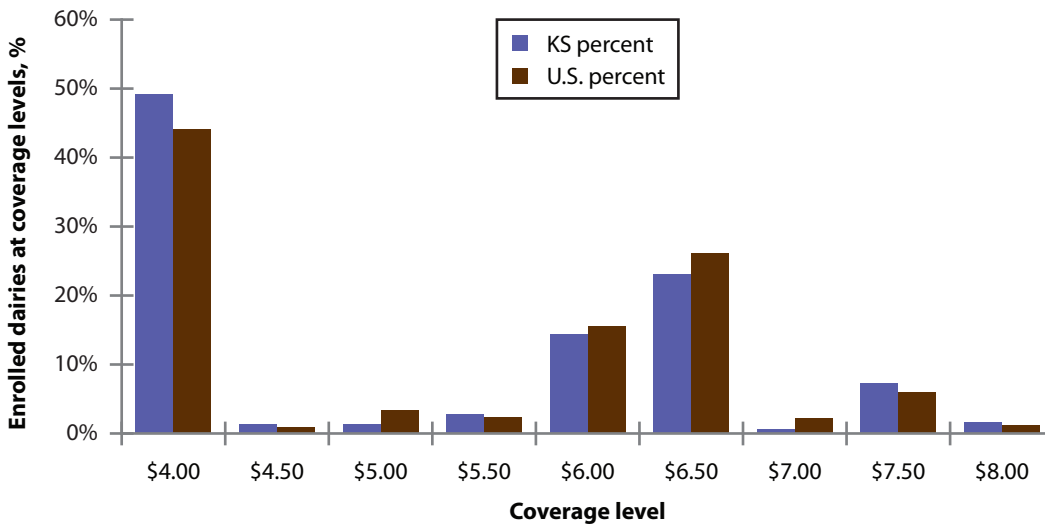


Figure 2. Percentage of U.S. and Kansas dairies enrolled in MPP-Dairy that purchased each of the 9 coverage levels.

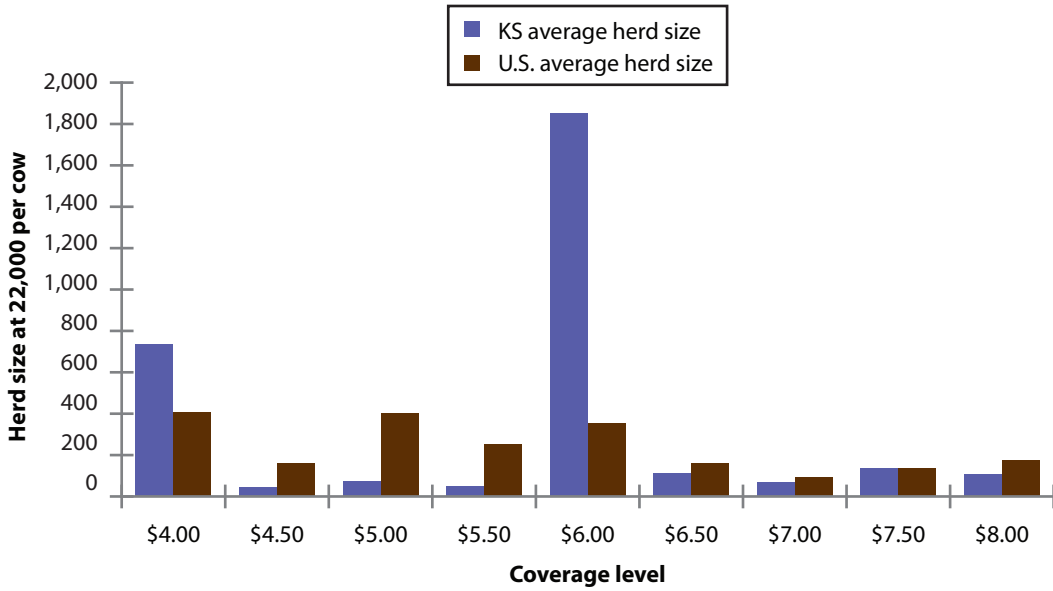


Figure 3. Average herd size of U.S. and Kansas dairies enrolled in MPP-Dairy that purchased each of the 9 coverage levels.

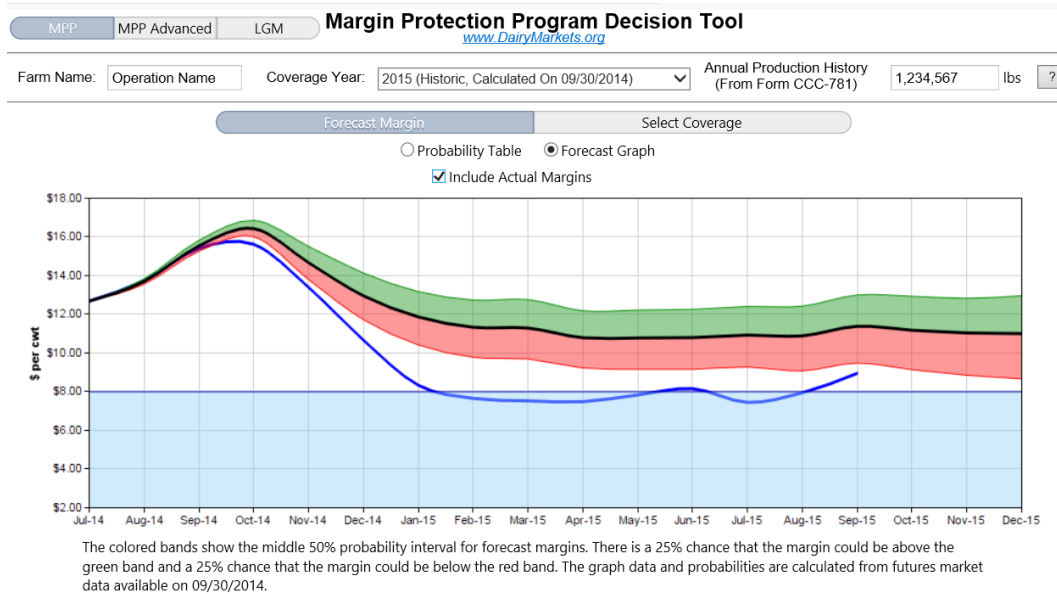


Figure 4. The MPP-Decision Tool predictions for the 2015 coverage year compared to the Actual Dairy Production Margin (<http://dairy.wisc.edu/MPP/Tool/>).