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2014 Farm Bill: The Margin Protection Program Dashboard MPP-Dairy

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Overview

The 2014 Farm Bill provides the most comprehensive reform to the U.S. federal dairy farm safety net seen in decades. In place of milk price and revenue support programs the new Farm Bill creates a Margin Protection Program for Dairy Producers (MPP-Dairy). MPP-Dairy is specifically designed to be simple to use and appealing to all dairy producers regardless of management style or business model. First, it provides dairy producers the opportunity to annually self-select coverage levels to protect against declines in national, rather than farm-level, income-over-feed-cost margins. Second, the premium rates are fixed at predetermined levels explicitly written into the Farm Bill. Finally, farms of all sizes can purchase margin protection near their historical maximum levels of milk production. For a detailed discussion of the specific dairy title provisions of the new 2014 Farm Bill see [here](#).

In today's post I will introduce an interactive dashboard demonstrating the features of the Margin Protection Program. The MPP-Dairy dashboard is fully interactive and functions on internet browsers supporting Adobe Flash and Shockwave players (see more technical information at the end of this post, and the dashboard can be viewed at the last page). MPP-Dairy dashboard users may adjust key decision variables such as the coverage year (using 2000-2013 data), coverage level, coverage percentage, and production history to illustrate how the program is designed to perform. Understanding how MPP-Dairy is designed to work as a risk management tool in different milk and feed price environments is important because MPP-Dairy choices are not 5-year decisions, rather dairy farmers can change their coverage options each calendar year. Given that there are 9 coverage levels and 14 coverage percentage options, each year a participating dairy operation may choose from as many as 126 coverage combinations. As a result, this MPP-Dairy dashboard emphasizes the strategic thinking that needs to occur during each calendar year decision.¹

For side-by-side comparisons, additional dashboards may be opened in a separate browser window by clicking [here](#).

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Data

The dairy production margin used to trigger MPP-Dairy payments uses the USDA National Agricultural Statistics Service (NASS) announced all-milk price per hundredweight, the USDA NASS announced corn price per bushel, the USDA NASS announced alfalfa hay price per ton, and the USDA Agricultural Marketing Service announced central Illinois high protein soybean meal price per ton. The historical prices used in the dashboard were collected from the “NASS Quickstats” database (see [here](#)) and the “USDA Livestock & Grain Market News Portal” (see [here](#)).

MPP-Dairy Dashboard User-Selected Parameters

MPP-Dairy dashboard users may adjust several key decision variables to illustrate program performance:

1. **Year (drop down menu)** – The dashboard includes calendar year data on milk and feed prices for 2000 to 2013. Users may select from each of the calendar year options to load a specific price environment for review. The calendar year selected will determine the performance metrics of MPP-Dairy.²
2. **Coverage Level (drop down menu)** – Margin Protection Program coverage levels are available from \$4 to \$8 per hundredweight in 50¢ increments. Higher coverage levels increase the premium rate but provide greater protection against declines in the national dairy production margin.
3. **Coverage Percent (drop down menu)** – Participating producers may receive coverage on 25% to 90% of their milk production history in 5% increments. Higher coverage percentages increase total participation costs but provide greater protection against declines in the national dairy production margin.
4. **Production History (text box)** – The production history is determined at sign-up in the first year of the program and is defined as the highest level of annual milk production during the 2011, 2012, or 2013 calendar years. In subsequent years a farm’s production history will be updated by USDA to reflect only the increase in national average milk production. Individual milk production growth above the national average will not be reflected in the updated production base. The dashboard is designed to compute results on as much as 9,999,999,999 pounds of milk production history.

MPP-Dairy Dashboard Output

The MPP-Dairy dashboard includes several output metrics defined below:

1. **Benefit** – The benefit is defined as the calendar year sum of indemnity payments provided under specific coverage options less the applicable premium and administrative fee. The benefit is based on the milk production covered in the program and is displayed in total dollars and dollars per hundredweight covered (defined as the product of the production history and the coverage percent).
2. **Net Premium** – The net premium represents the total participation costs of the program less the indemnity received (under the applicable coverage options). When the net premium is greater than zero this implies that: (i) the indemnity was less than the premium; or (ii) an indemnity payment was not triggered. Results are presented in aggregate for the calendar year and for each consecutive two-month period.
3. **Net Indemnity** – The net indemnity (“net benefit”) represents the benefit of participation less the participation costs (under the applicable coverage options). The net indemnity is greater than zero when the indemnity is greater than the participation costs. Results are presented in aggregate for the calendar year and for each consecutive two-month period.
4. **Cost** – The cost represents the per hundredweight cost of participation for the applicable coverage options (includes the \$100 administrative fee). Premium costs are calculated by applying the lower premium rates to the first four million pounds of milk covered under MPP-Dairy.

Summary

The 2014 Farm Bill provides dairy farmers with a new risk management instrument in the form of MPP-Dairy. MPP-Dairy will pay an indemnity to a participating dairy farm when the difference between the national average all-milk price and the formula-derived estimate of total herd feed costs falls below a farmer-selected margin trigger over a defined consecutive two-month period.

Participating dairy operations may choose each year what level of margin protection to purchase for the calendar year. Margin protection is available from \$4 to \$8 per hundredweight in 50¢ increments and enrolled producers may receive coverage on 25% to 90% of their milk production history in 5% increments. The participation costs and indemnity payments associated with MPP-Dairy differ depending on these choice variables in the contract design.

Users of the MPP-Dairy dashboard may use their actual milk production history and adjust key decision variables including the coverage level and coverage percentage to determine how MPP-Dairy may function under a variety of price environments. The MPP-Dairy dashboard, while for educational purposes only, highlights the strategic thinking that dairy farmers need to consider during each calendar year sign-up decision.

Once the final provisions of the MPP-Dairy are released by USDA, a team of University extension economists (see [here](#)) will release a suite of web-based dairy forecasting and support tools for MPP-Dairy and other dairy risk management options. The MPP-Dairy decision tool will calculate premium rates and estimate benefits for every combination of coverage options using both USDA price forecasts and real time market information on milk and feed prices. In addition to MPP-Dairy, the web-based decision aids will assist dairy farmers in making similar considerations with other risk management instruments such as Livestock Gross Margin Insurance for Dairy Cattle and futures and options contracts. This suite of decision aids will be available, and fully customizable, to any dairy producer in the U.S. and will offer effective instruments to provide dairy farmers an opportunity to make informed risk management decisions regarding MPP-Dairy and other risk management solutions.

Notes

¹ The dashboard is designed for educational purposes only, had MPP-Dairy been in operation the milk and feed prices used in the dashboard would likely have been different. Additionally, at the time of this *farmdoc daily* article the rules and regulations of MPP-Dairy have not been published by USDA. This post and the dashboard reflect my interpretations of how MPP-Dairy may be administered.

² The dashboard does not include forecasts of market prices for milk or feed, and is not designed to estimate future MPP-Dairy benefits.

Technical Information on Adobe Flash and Shockwave Players

For help with Adobe Flash Player see <http://get.adobe.com/flashplayer/>

For help with Adobe Shockwave see <http://get.adobe.com/shockwave/>

References

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