MPP Decision Guide 16-01

Comparison of Optimal MPP-Dairy Participation Strategies for 2007-2013 Actual Margins and 2014-2018 Actual and Expected Margins

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How different are revenue-maximizing strategies using MPP-Dairy during pre-program years 2007-2013 and the actual program years 2014-2018?

In most previous educational efforts about MPP-Dairy, the likely impacts and appropriate strategies for dairy farms were evaluated using historical data. For example, ***Decision Guide 14-05*** used information on observed margins from 2007 to 2013 to evaluate revenue-maximizing strategies for farms of different sizes. However, using past margin data is only helpful to defining useful strategies for MPP-Dairy participation if the actual program years (2014-2018) demonstrate margin patterns similar to those observed in the past. ***If the margin patterns are markedly different while the program is actually in operation, then the revenue-maximizing strategies and results from use of MPP-Dairy would also differ.*** This Decision Guide briefly describes margin value patterns 2007-2013 and the actual and expected margin patterns for 2014-2018. We then calculate the revenue-maximizing strategy for MPP-Dairy use for each year, and for the best single strategy during 2007-2013 and 2014-2018 for an average-size US farm (180 cows and 21,000 lbs milk per cow per year).

Margin patterns since the implementation of MPP-Dairy have differed from (and are projected to differ from) those in the past (Figure 1). Average margin values have been (and are projected to be) $1.55/cwt higher during 2014-2018 than during 2007-2013. The number of months in which the MPP-Dairy margin was below $8/cwt and $6/cwt has also been different since 2014 than during 2007-2013. In 50% of the months from 2007 to 2013, the MPP-Dairy margin was below $8/cwt, and in 22% of the months the margin was below $6/cwt. For 2014-2018, only 20% of months have (or are projected to be) below $8/cwt, and only 2% of months is the MPP-Dairy margin below (or projected to be below) $6/cwt. Thus, substantially higher average margins and many fewer months with quite low margins have been experienced (or are expected) during the actual program period than in the 7 years prior to the program.

The difference in actual (or expected) margins affects the revenue-maximizing strategies for an average-sized US dairy farm (Table 1). The best strategy for a farm with a production history 3.8 million lbs per year (below the 4 million-lb limit for the lower MPP-Dairy premium schedule) in a given year depends on margins, but would either be catastrophic coverage ($4 margin, 90% of milk) when margins average above $8/cwt, or maximum coverage ($8 margin, 90% of production history) when margins average below $8/cwt. If farms had to choose one strategy to maximize net payments from MPP-Dairy during 2007-2013, it would have been to maximize coverage ($8 margin, 90% of production history). However, during the higher-average-margin period 2014-2018, the single strategy to maximize net payments would be catastrophic coverage. The revenues provided from program participation would also have been very different during the two time periods. From 2007-2013, the single strategy of $8 coverage on 90% of production history would have resulted in program payments net of premiums of $0.58/cwt. In contrast, the revenue-maximizing strategy for 2014-2018 would have provided positive payments net of premiums only in 2006 ($0.06/cwt) and would have resulted in a 0.3-cent net cost for the entire period.

This illustrates that the revenue-maximizing strategy for use of the MPP-Dairy program (which is not the only possible objective for a farm) and the program's impacts depends on market conditions, which can be difficult to predict. If margins during 2014-2018 had been similar to those in previous years, the program would have provided higher returns net of premium payments than are likely to be experienced during the five years for which the program currently is authorized.

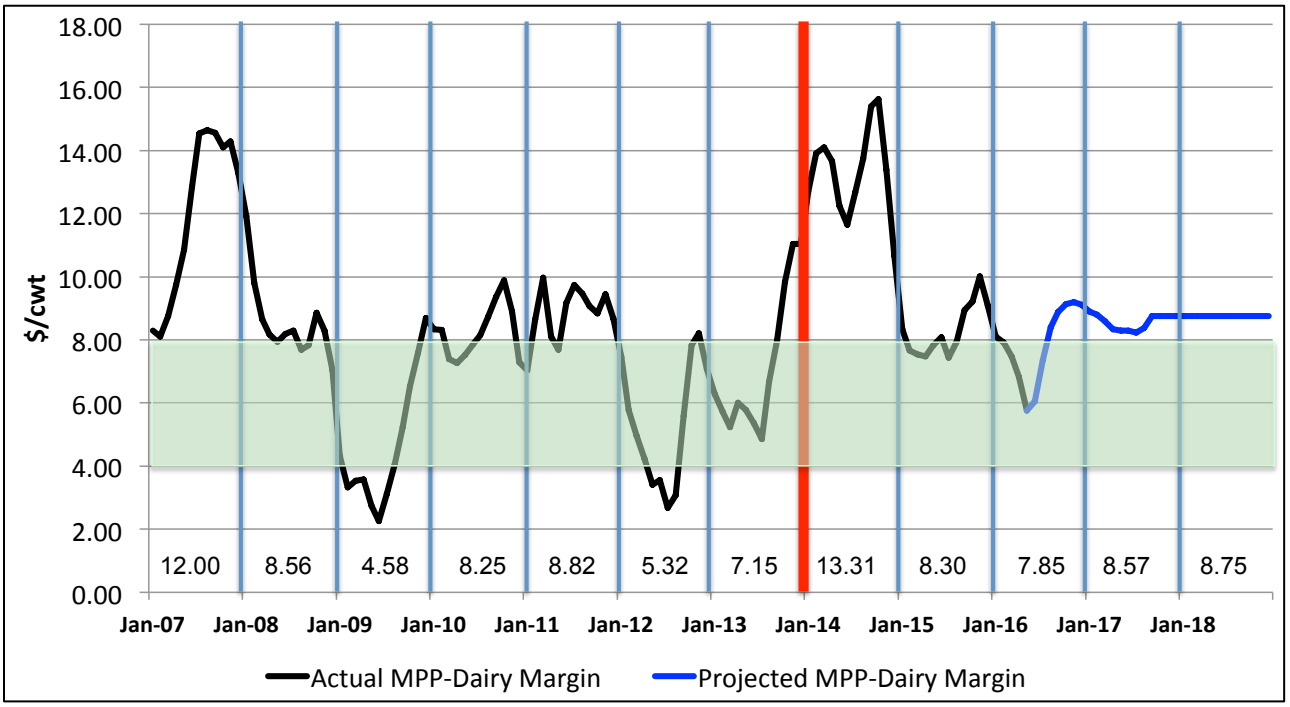

Figure 1. Actual and Projected MPP-Dairy Margins, 2007-2018, with Average Annual Values Shown by Year

Table 1. Return-Maximizing Margin Coverage and Percentage of Production History Choices for MPP-Dairy, 2007 to 2013 Actual Margins Versus 2014-2018 Actual and Expected Margins

Year or Period of Years	Return-Maximizing MPP-Dairy Coverage	Fees and Premiums, $	Net Return, $	Net Return, $/cwt
2007	4.00/90	100	-100	0.00
2008	4.00/90	100	-100	0.00
2009	8.00/90	16,260	100,837	2.67
2010	4.00/90	100	-100	0.00
2011	4.00/90	100	-100	0.00
2012	8.00/90	16,260	74,903	1.98
2013	8.00/90	16,260	33,722	0.89
2007-2013 (1 strategy)	**8.00/90**	**113,817**	**152,878**	**0.58**
2014	4.00/90	100	-100	0.00
2015	4.00/90	100	-100	0.00
2016 [a]	*8.00/90*	*16,260*	*2,147*	*0.06*
2017 [a]	*4.00/90*	*100*	*-100*	*0.00*
2018 [a]	*4.00/90*	*100*	*-100*	*0.00*
2014-2018 (1 strategy) [a]	**4.00/90**	**500**	**-500**	**-0.003**

NOTE: Values for 2007 to 2015 are based on actual observed margins.

[a]Based on projected margins from June 2016 to December 2018.

Revenue-maximizing participation strategies for MPP-Dairy are very different for the period 2007-2013 and 2014-2018 due to higher average margin levels and many fewer very-low-margin months.

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