

Sources of Differences in the MPP-Dairy Margin and a Similarly-Calculated Margin for Pennsylvania during 2010-2016

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Differences in the All-milk price and hay prices are the major sources of differences between the MPP-Dairy Margin and a similarly-calculated margin in Pennsylvania.

The MPP-Dairy program uses a single national-level margin value to determine when payments will be made to dairy producers. A number of industry analysts have suggested that a single value is inappropriate because margins in a particular state or region (or even for an individual farm) can differ from the national margin, and there have been calls for regionalizing the MPP-Dairy margin calculation for the purpose of indemnity payments. **Regionalizing the program presents its own challenges, and additional substantive analysis of the impacts of program modifications should be undertaken to support more informed decision-making about program design.**

A previous Decision Guide in this series (14-09; dairy.wisc.edu/PubPod/Pubs/DG14-09.pdf) noted that margins in Pennsylvania differed from the MPP-Dairy margin, often by more than \$2/cwt. The purpose of this Information Letter is to discuss how this relationship between the MPP-Dairy margin and a similarly-calculated margin for Pennsylvania (PA) has changed, and to describe the sources of the differences.

The MPP-Dairy margin uses national average monthly prices for milk, corn and hay reported by the National Agricultural Statistics Service and the soybean meal (SBM) price reported by USDA's Agricultural Marketing Service for the Central Illinois region. The reported feed prices are multiplied by factors (1.0728 for corn, 0.00735 for SBM and 0.0137 for alfalfa hay) and subtracted from the all-milk price to determine the MPP-Dairy margin. To construct a similar margin for PA, we used NASS-reported state values of the all-milk, corn and alfalfa hay prices. The SBM price for PA was estimated as the Central Illinois price plus \$40 per ton, which results in values roughly consistent with prices reported in the publication *Feedstuffs* for Buffalo, NY. These were multiplied by the same

factors as in the national margin calculation¹. We then compared the impact that each of these factors would have on the difference between the national value and the comparable value for PA.

The PA margin equivalent was generally larger than the MPP-Dairy margin prior to 2015 (Figure 1 and Table 1). Note that in the figure, values above \$0 indicates that the factor had the effect of increasing the margin in PA compared to the national average, and values below \$0 indicate that the factor had the effect of decreasing the margin in PA compared to the national average. The larger margin in PA during 2010-2012 was due to an all-milk price higher than the national average and lower hay prices than the national average, despite higher corn and SBM prices during much of that period. In 2013 and most of 2014, all of the factors except SBM contributed to making the PA margin larger than the national value, by \$1.35/cwt on average in 2013 (Table 1).

Price relationships have changed since late 2014, however, with corn, hay and SBM prices all reducing the PA margin relative to the national average. Although the all-milk price remained higher in PA than the national average, that difference is declining over time (slope shown in Figure 1). Beginning in 2015, the PA margin was below the national margin in most months, with average values of \$0.19/cwt. The increased hay price is largely due to poor harvests and may be expected to contribute positively in future years. ***These results suggest that strategies for the use of MPP-Dairy in PA (and likely in other states) should account for the changing pattern of this difference (the basis) over time.***

¹ This may somewhat overstate the cost component for alfalfa hay in PA, given lesser use of that ingredient in rations compared to the US overall average (Alan Zepp, personal communication).

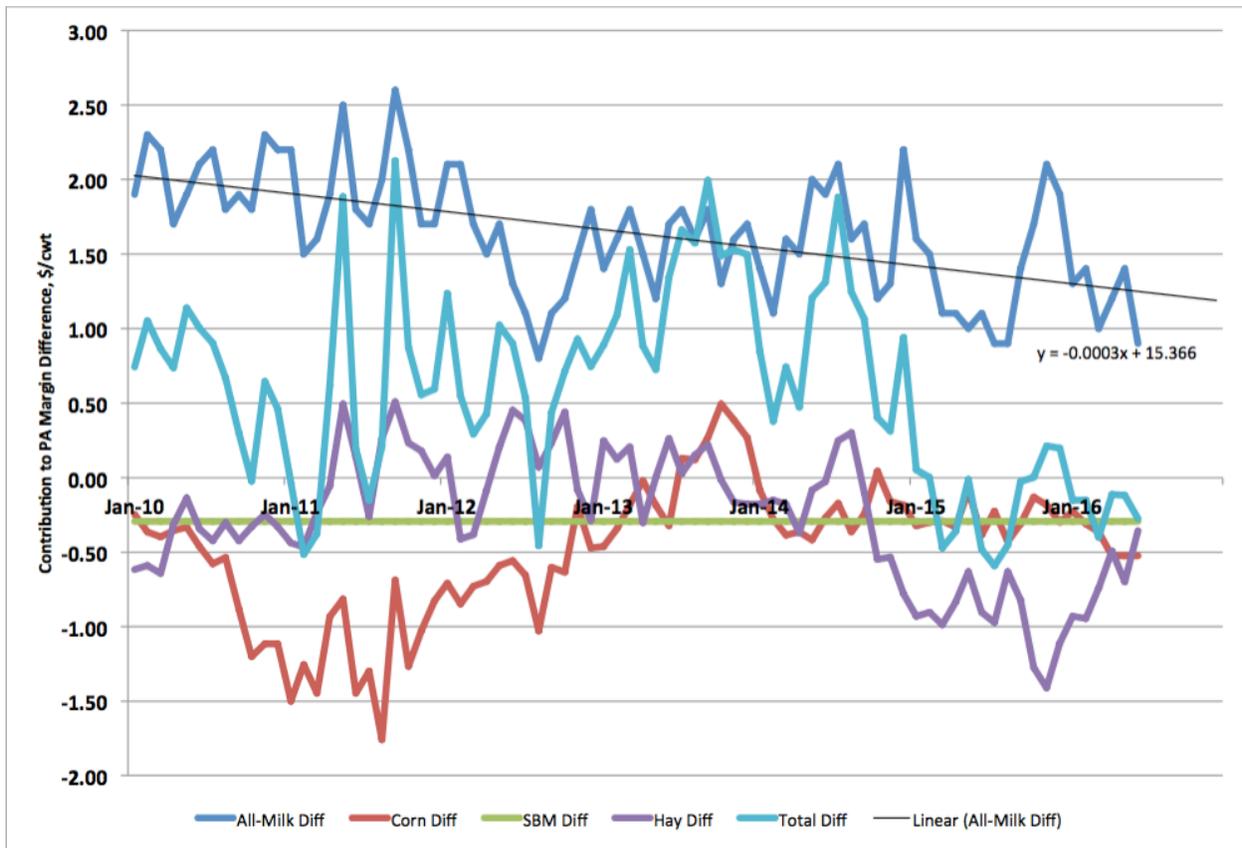


Figure 1. Differences Between the National MPP-Dairy Margin and a Similarly-Calculated Margin in Pennsylvania, 2010-2016

Table 1. Annual Differences Between Pennsylvania and MPP-Dairy Margin Components, 2010-2016^a

Year	Difference due to NASS All-milk Price	Difference due to NASS Corn Price	Difference due to Soybean Meal Price ^b	Difference due to NASS Hay Price	Overall Difference in Margin (PA Less MPP-Dairy)
	(\$/cwt)	(\$/cwt)	(\$/cwt)	(\$/cwt)	(\$/cwt)
2010	2.03	-0.63	-0.29	-0.39	0.71
2011	1.95	-1.19	-0.29	0.03	0.50
2012	1.49	-0.64	-0.29	0.06	0.61
2013	1.58	0.01	-0.29	0.05	1.35
2014	1.63	-0.24	-0.29	-0.20	0.90
2015	1.31	-0.27	-0.29	-0.94	-0.19
2016	1.20	-0.41	-0.29	-0.69	-0.20

^a Based on data through June 2016. ^b Soybean meal price for PA estimated as USDA-AMS price for Central Illinois plus \$40/ton, which means this component of the difference is constant over time (Courtesy of Alan Zepp, Center for Dairy Excellence).

Note: Margin components are calculated based on their contribution to the MPP-Dairy margin, which means they are multiplied by the factors in the margin calculation (1 for all-milk price, 1.0728 for corn, 0.00735 for SBM and 0.0137 for hay).

The margin in Pennsylvania exceeded the national MPP-Dairy margin on average during 2010-2014, but calculated PA margins were less than national margins during 2015 and 2016.

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