Dairy Outlook: November 2017

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Market Commentary

Markets continue to move sideways with little prospect for forecast price improvement. None of the factors that are well known-- cow numbers, expected domestic and global milk production, high dairy product inventories and current trade patterns, give much optimism for price improvement. However, a number of very tense areas of the world could cause a future disruption in a way that would change price forecasts.

If price forecasts for 2018 are realized, the majority of Pennsylvania dairy producers will need to have a cost of production below $17.50/cwt in order to cash flow for the year. This fact poses a significant challenge to a number of our state's dairies, especially as some have delayed equipment reinvestment and repairs hoping for better years.

"Open road stormy sky" Desertrose7, pixabay.com CC0

Components the Only Game in Town

Dairy producers continue to focus on shipping more components as the main way to improve income. The Northeast Market Administrator's Bulletin for September contained some interesting statistics on butterfat and protein tests on milk shipped in Order 1. Over the last 17 years, butterfat tests have increased an average of 0.14% and protein tests have increased an average of 0.11. However, those average increases do not reflect the increases observed on many well managed dairy farms in the state. During many dairy advisory team meetings, the conversation focuses on the forage quality and management needed to achieve the goal of an average of 6 lbs of components produced daily from each cow in the herd.

The Cyber Economy's Indirect Impact on PA Dairy

While there are dairy producers in most of Pennsylvania's counties, the majority of dairy farms are located in the southcentral / southeast portion of our state. A recent study of Pennsylvania's dairy industry, commissioned by the Center for Dairy Excellence, indicated that the industry is continuing to grow and concentrate in the areas where it is already located. This same area of PA has a tremendous transportation network, which the dairy industry has always seen as a benefit in moving milk to market.

However, over the past 10 years, this extensive transportation network has also attracted a large number of warehouses, or "logistics centers" to the area. Proponents of logistics centers forecast that there is no end to the amount of these structures needed, as an increasing share of consumers purchase an increasing amount of product on-line. These logistic centers are located along this transportation grid in Southeast Pennsylvania for the same reason that our extensive food processing industry in located there—because half of the population of the United States can be reached within a 12 hour drive.

Some in our state's dairy industry would say the biggest impact of these logistics centers to dairy is the amount of farmland that has been taken out of production to build these centers. However, these logistic centers are affecting the dairy industry in a much less obvious way. Anecdotal information indicates that average laborers may earn a wage of $14.50/hour. As a result, dairy farms within a reasonable commute of any of these centers find that they are faced with a minimum wage floor, not set by state government, but by local competition for laborers. If dairies are not willing to match the wage rate offered by the logistics center, it becomes increasingly difficult to recruit and retain employees.

Yet, many Pennsylvania dairies have a cost structure that is too high to compete successfully with dairies in other parts of our nation, mainly due to feed costs. Higher labor costs are not helpful to the need for competitive cost of production on our state's dairy farms.

Table 1: 12 month Pennsylvania & U.S. All Milk Income, Feed Cost, Income over Feed Cost ($/milk cow/day)

	PA All Milk Income	PA Feed Cost[1]	PA IOFC	*3 yr avg. breakeven IOFC*[2]	US All Milk Income	US Feed Cost[1]	US IOFC
Oct-16	$ 13.20	$ 4.82	$ 8.38	*$ 8.97*	$ 12.53	$ 3.64	$ 8.89
Nov-16	$ 13.28	$ 4.72	$ 8.56	*$ 8.97*	$ 13.35	$ 3.55	$ 9.80
Dec-16	$ 14.78	$ 4.87	$ 9.90	*$ 8.97*	$ 14.18	$ 3.54	$ 10.64
Jan-17	$ 15.00	$ 4.76	$ 10.24	*$ 8.97*	$ 14.18	$ 3.58	$ 10.60
Feb-17	$ 14.70	$ 4.59	$ 10.11	*$ 8.97*	$ 13.88	$ 3.60	$ 10.27
Mar-17	$ 14.10	$ 4.57	$ 9.53	*$ 8.97*	$ 12.98	$ 3.70	$ 9.27
Apr-17	$ 13.20	$ 4.71	$ 8.49	*$ 8.97*	$ 12.38	$ 3.88	$ 8.50
May-17	$ 13.05	$ 4.58	$ 8.47	*$ 8.97*	$ 12.53	$ 3.98	$ 8.54
Jun-17	$ 13.65	$ 4.48	$ 9.17	*$ 8.97*	$ 12.98	$ 3.92	$ 9.05
Jul-17	$ 13.95	$ 4.89	$ 9.06	*$ 8.97*	$ 12.98	$ 3.95	$ 9.02
Aug-17	$ 14.40	$ 4.55	$ 9.85	*$ 8.97*	$ 13.50	$ 3.76	$ 9.74
Sep-17	$ 14.25	$ 4.42	$ 9.83	*$ 8.97*	$ 13.35	$ 3.80	$ 9.55
Oct-17	$ 14.30	$ 4.25	$ 10.05	*$ 8.97*	$ 13.64	$ 3.81	$ 9.83
Nov-17	$ 14.60	$ 4.05	$ 10.55	*$ 8.97*	$ 13.93	$ 3.83	$ 10.10
12 mo. Avg.	$ 13.96	$ 4.66	$ 9.30		$ 13.23	$ 3.74	$ 9.49
12 mo. change	$ 0.87	$ (0.26)	$ 1.13		$ 1.01	$ (0.13)	$ 1.14
% change	6.6%	-5.3%	13.9%		8.3%	-3.2%	13.6%

[1] Based on corn, alfalfa hay, and soybean meal equivalents to produce 75 lbs. of milk (Bailey & Ishler, 2007)

[2] The 3 year average actual IOFC breakeven in Pennsylvania from 2014-2016 was $8.97 ± $1.76 ($/milk cow/day) (Beck, Ishler, Goodling, 2017).

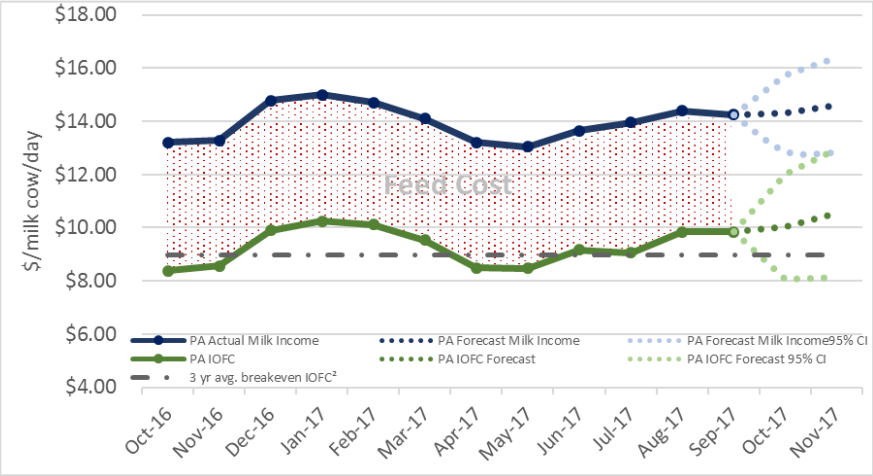
Table 2: 12 month Pennsylvania & U.S. All Milk Price, Feed Cost, Milk Margin ($/cwt for lactating cows)

	PA All Milk Price	PA Feed Cost[1]	PA Milk Margin	*3 yr avg. breakeven Milk Margin*[2]	US All Milk Price	US Feed Cost[1]	US Milk Margin
Oct-16	$ 17.60	$ 6.43	$ 11.17	*$ 12.41*	$ 16.70	$ 4.85	$ 11.85
Nov-16	$ 17.70	$ 6.29	$ 11.41	*$ 12.41*	$ 17.80	$ 4.73	$ 13.07
Dec-16	$ 19.70	$ 6.50	$ 13.20	*$ 12.41*	$ 18.90	$ 4.72	$ 14.18
Jan-17	$ 20.00	$ 6.35	$ 13.65	*$ 12.41*	$ 18.90	$ 4.77	$ 14.13
Feb-17	$ 19.60	$ 6.12	$ 13.48	*$ 12.41*	$ 18.50	$ 4.81	$ 13.69
Mar-17	$ 18.80	$ 6.09	$ 12.71	*$ 12.41*	$ 17.30	$ 4.93	$ 12.37
Apr-17	$ 17.60	$ 6.28	$ 11.32	*$ 12.41*	$ 16.50	$ 5.17	$ 11.33
May-17	$ 17.40	$ 6.10	$ 11.30	*$ 12.41*	$ 16.70	$ 5.31	$ 11.39
Jun-17	$ 18.20	$ 5.97	$ 12.23	*$ 12.41*	$ 17.30	$ 5.23	$ 12.07
Jul-17	$ 18.60	$ 6.53	$ 12.07	*$ 12.41*	$ 17.30	$ 5.27	$ 12.03
Aug-17	$ 19.20	$ 6.06	$ 13.14	*$ 12.41*	$ 18.00	$ 5.01	$ 12.99
Sep-17	$ 19.00	$ 5.89	$ 13.11	*$ 12.41*	$ 17.80	$ 5.06	$ 12.74
Oct-17	$ 19.06	$ 5.66	$ 13.40	*$ 12.41*	$ 18.19	$ 5.08	$ 13.10
Nov-17	$ 19.47	$ 5.40	$ 14.07	*$ 12.41*	$ 18.57	$ 5.10	$ 13.47
12 mo. Avg.	$ 18.62	$ 6.22	$ 12.40		$ 17.64	$ 4.99	$ 12.65
12 mo. change	$ 1.16	$ (0.35)	$ 1.51		$ 1.35	$ (0.17)	$ 1.52
% change	6.6%	-5.3%	13.9%		8.3%	-3.2%	13.6%

[1] Based on corn, alfalfa hay, and soybean meal equivalents to produce 75 lbs. of milk (Bailey & Ishler, 2007)

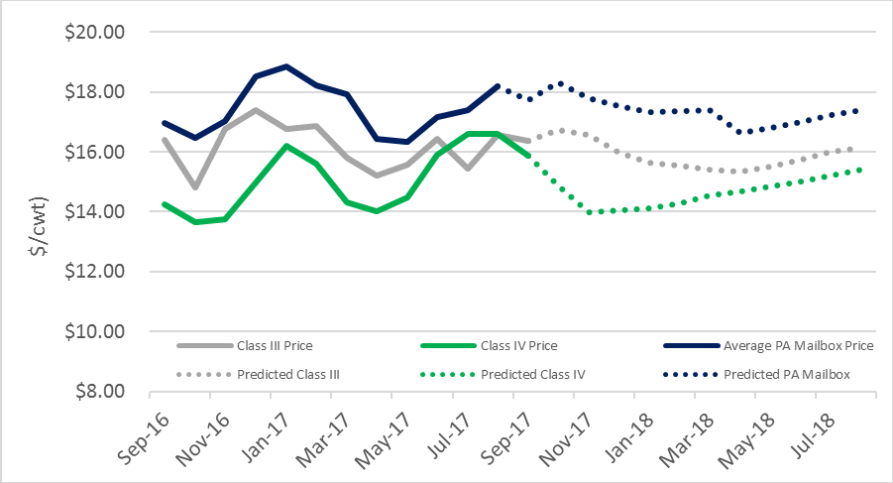
[2] The 3 year average actual Milk Margin breakeven in Pennsylvania from 2014-2016 was $12.41 ± $2.38 ($/cwt) (Beck, Ishler, Goodling, 2017).

Figure 1: 12 month PA Milk Income and Income over Feed Cost



[2] The 3 year average actual IOFC breakeven in Pennsylvania from 2014-2016 was $8.97 ± $1.76 ($/milk cow/day) (Beck, Ishler, Goodling, 2017).

Figure 2: 24 month Actual and Predicted* Class III, Class IV, and Pennsylvania Average Mailbox Price ($/cwt)



** Predicted values based on Class III and Class IV futures regression (Gould, 2017).*

Table 3: 24 month Actual and Predicted* Class III, Class IV, and Pennsylvania Average Mailbox Price ($/cwt)

Month	Class III Price	Class IV Price	Average PA Mailbox Price
Sep-16	$16.39	$14.25	$16.95
Oct-16	$14.82	$13.66	$16.48
Nov-16	$16.76	$13.76	$17.04
Dec-16	$17.40	$14.97	$18.53
Jan-17	$16.77	$16.19	$18.86
Feb-17	$16.88	$15.59	$18.24
Mar-17	$15.81	$14.32	$17.91
Apr-17	$15.22	$14.01	$16.43
May-17	$15.57	$14.49	$16.32
Jun-17	$16.44	$15.89	$17.17
Jul-17	$15.45	$16.60	$17.40
Aug-17	$16.57	$16.61	*$18.21*

Sep-17	$16.36	$15.86	*$17.74*
Oct-17	*$16.72*	*$14.89*	*$18.32*
Nov-17	*$16.58*	*$13.98*	*$17.81*
Dec-17	*$15.98*	*$14.04*	*$17.52*
Jan-18	*$15.65*	*$14.11*	*$17.34*
Feb-18	*$15.55*	*$14.27*	*$17.37*
Mar-18	*$15.40*	*$14.54*	*$17.41*
Apr-18	*$15.35*	*$14.69*	*$16.63*
May-18	*$15.50*	*$14.84*	*$16.79*
Jun-18	*$15.74*	*$15.01*	*$17.00*
Jul-18	*$16.01*	*$15.21*	*$17.25*
Aug-18	*$16.14*	*$15.40*	*$17.40*

** Italicized predicted values based on Class III and Class IV futures regression (Gould, 2017).*

To look at feed costs and estimated income over feed costs at varying production levels by zip code, check out the Penn State Extension Dairy Teams DairyCents or DairyCents Pro apps today.

Data sources for price data:

All Milk Price: Pennsylvania and U.S. All Milk Price (USDA, 2017)

Predicted Class III, Class IV, and Pennsylvania Mailbox Price (average of the Eastern and Western PA mailbox Price) (Gould, 2017)

Alfalfa Hay: Pennsylvania and U.S. monthly Alfalfa Hay Price (USDA, 2017)

Corn Grain: Pennsylvania and U.S. monthly Corn Grain Price (USDA, 2017)

Soybean Meal: Feed Price List (Ishler, 2017) and average of Decatour, Illinois Rail & Truck Soybean Meal, High Protein prices, National Feedstuffs (Gould, 2017).

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