

# Dairy Outlook: May 2018

**Long term survival of a dairy operation will hinge on management's ability to find ways to push the cost of production below \$17.50/cwt while maintaining some level of reinvestment in the operation.**



David Swartz, Penn State

## An oasis or a mirage?

Milk futures prices have taken on a decidedly positive movement over the past month. As can be seen in Table 3 of this newsletter, predicted PA Mailbox milk prices for the last 4 months of 2018 and the first 2 months of 2019 will average about \$2.00/cwt above this month's milk price. In fact, if those predicted prices hold, we would not have experienced that level of sustained prices for several years! Many in the industry are looking at those 4 th quarter prices with the same longing of a weary desert traveler looking at an oasis on the horizon that has the promise of water.

But as we know, sometimes the oasis is more of a mirage than reality, and the promise of water to the weary traveler never comes true. One aspect of the markets that make the 4 th quarter prices somewhat of a mirage is feed prices. Take a look at Tables 1 and 2 in this newsletter. Notice that margins continue to be suppressed in March, even though milk prices improved, due to higher feed costs. The escalating price of soybean meal and corn have yet to be fully included in these calculations, so higher feed costs will keep downward pressure on margins (and profitability) even as milk prices improve through the 3 rd quarter of 2018. We do expect improved

margins by the 4 th quarter of this year and the first quarter of next year, but the margins will not directly follow milk prices due to higher feed prices.

Even with a much improved predicted price in the 4 th quarter, Table 3 show a 2018 average PA mailbox price of \$17.19 / cwt. Very few Pennsylvania dairy producers have a cost of production under that number. In fact, the majority of Pennsylvania dairy operations are struggling to push their cost of production below \$18.00/cwt. Long term survival of a dairy operation will hinge on management's ability to find ways to push the cost of production below \$17.50/cwt while maintaining some level of reinvestment in the operation.

## Some relief for the checkbook

The dairy economy over the past 30 months has not been kind to checkbooks, but the recently announced revisions to the MPP program look like an opportunity to gain a few dollars for many producers. Producers should definitely visit their FSA office by mid May to make a decision on signing up for the program. Spring field work has been delayed due to the cool, wet spring, and many dairy producers have yet to even empty their manure storages for the spring. However, the pressure of spring field work should not prevent producers from making a trip to the FSA office this month. Penn State Extension is providing some on line discussions on the new MPP programs.

## Outlook Tables and Graphs

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



**PennState Extension**

	PA All Milk Income	PA Feed Cost <sup>1</sup>	PA IOFC	3 yr avg. breakeven IOFC <sup>2</sup>	US All Milk Income	US Feed Cost <sup>1</sup>	US IOFC
Apr-17	\$ 13.05	\$ 4.71	\$ 8.34	\$ 9.00	\$ 12.38	\$ 3.88	\$ 8.50
May-17	\$ 13.05	\$ 4.58	\$ 8.47	\$ 9.00	\$ 12.53	\$ 3.98	\$ 8.54
Jun-17	\$ 13.50	\$ 4.48	\$ 9.02	\$ 9.00	\$ 12.98	\$ 3.92	\$ 9.05
Jul-17	\$ 14.03	\$ 4.89	\$ 9.13	\$ 9.00	\$ 12.90	\$ 3.95	\$ 8.95
Aug-17	\$ 14.48	\$ 4.55	\$ 9.93	\$ 9.00	\$ 13.58	\$ 3.76	\$ 9.81
Sep-17	\$ 14.40	\$ 4.42	\$ 9.98	\$ 9.00	\$ 13.43	\$ 3.80	\$ 9.63
Oct-17	\$ 14.10	\$ 4.35	\$ 9.75	\$ 9.00	\$ 13.58	\$ 3.84	\$ 9.73
Nov-17	\$ 14.18	\$ 4.61	\$ 9.56	\$ 9.00	\$ 13.65	\$ 3.74	\$ 9.91
Dec-17	\$ 13.80	\$ 4.56	\$ 9.24	\$ 9.00	\$ 12.90	\$ 3.78	\$ 9.12
Jan-18	\$ 12.75	\$ 4.58	\$ 8.17	\$ 9.00	\$ 12.08	\$ 3.87	\$ 8.21
Feb-18	\$ 11.93	\$ 4.36	\$ 7.56	\$ 9.00	\$ 11.48	\$ 4.00	\$ 7.48
Mar-18	\$ 12.00	\$ 4.61	\$ 7.39	\$ 9.00	\$ 11.70	\$ 4.22	\$ 7.48
Apr-18	\$ 11.70	\$ 4.57	\$ 7.13	\$ 9.00	\$ 11.62	\$ 4.25	\$ 7.37
May-18	\$ 11.47	\$ 4.55	\$ 6.92	\$ 9.00	\$ 11.42	\$ 4.28	\$ 7.13
12 mo. Avg.	\$ 13.44	\$ 4.56	\$ 8.88		\$ 12.76	\$ 3.90	\$ 8.87
12 mo. change	\$ 0.13	\$ (0.16)	\$ 0.29		\$ 0.07	\$ 0.16	\$ (0.09)
% change	1.0%	-3.4%	3.4%		0.5%	4.3%	-1.0%

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

<sup>2</sup>The 3 year average actual IOFC breakeven in Pennsylvania from 2015-2017 was \$9.00 ± \$1.67 (\$/milk cow/day) (Beck, Ishler, Goodling, 2018).

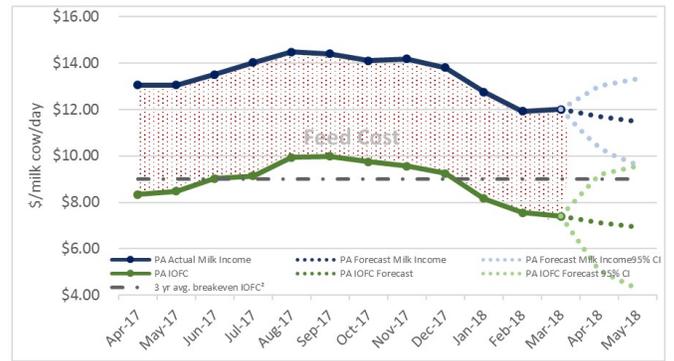
**Table 2: 12 month Pennsylvania and U.S. All Milk Price, Feed Cost, Milk Margin (\$/cwt for lactating cows)**

	PA All Milk Price	PA Feed Cost <sup>1</sup>	PA Milk Margin	3 yr avg. breakeven Milk Margin <sup>2</sup>	US All Milk Price	US Feed Cost <sup>1</sup>	US Milk Margin
Apr-17	\$ 17.40	\$ 6.28	\$ 11.12	\$ 12.33	\$ 16.50	\$ 5.17	\$ 11.33
May-17	\$ 17.40	\$ 6.10	\$ 11.30	\$ 12.33	\$ 16.70	\$ 5.31	\$ 11.39
Jun-17	\$ 18.00	\$ 5.97	\$ 12.03	\$ 12.33	\$ 17.30	\$ 5.23	\$ 12.07
Jul-17	\$ 18.70	\$ 6.53	\$ 12.17	\$ 12.33	\$ 17.20	\$ 5.27	\$ 11.93
Aug-17	\$ 19.30	\$ 6.06	\$ 13.24	\$ 12.33	\$ 18.10	\$ 5.01	\$ 13.09
Sep-17	\$ 19.20	\$ 5.89	\$ 13.31	\$ 12.33	\$ 17.90	\$ 5.06	\$ 12.84
Oct-17	\$ 18.80	\$ 5.80	\$ 13.00	\$ 12.33	\$ 18.10	\$ 5.13	\$ 12.97
Nov-17	\$ 18.90	\$ 6.15	\$ 12.75	\$ 12.33	\$ 18.20	\$ 4.99	\$ 13.21
Dec-17	\$ 18.40	\$ 6.08	\$ 12.32	\$ 12.33	\$ 17.20	\$ 5.04	\$ 12.16
Jan-18	\$ 17.00	\$ 6.11	\$ 10.89	\$ 12.33	\$ 16.10	\$ 5.15	\$ 10.95
Feb-18	\$ 15.90	\$ 5.82	\$ 10.08	\$ 12.33	\$ 15.30	\$ 5.33	\$ 9.97
Mar-18	\$ 16.00	\$ 6.15	\$ 9.85	\$ 12.33	\$ 15.60	\$ 5.63	\$ 9.97
Apr-18	\$ 15.60	\$ 6.09	\$ 9.51	\$ 12.33	\$ 15.49	\$ 5.66	\$ 9.82
May-18	\$ 15.29	\$ 6.07	\$ 9.23	\$ 12.33	\$ 15.22	\$ 5.71	\$ 9.51
12 mo. Avg.	\$ 17.92	\$ 6.08	\$ 11.84		\$ 17.02	\$ 5.19	\$ 11.82
12 mo. change	\$ 0.18	\$ (0.21)	\$ 0.39		\$ 0.09	\$ 0.21	\$ (0.12)
% change	1.0%	-3.4%	3.4%		0.5%	4.3%	-1.0%

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

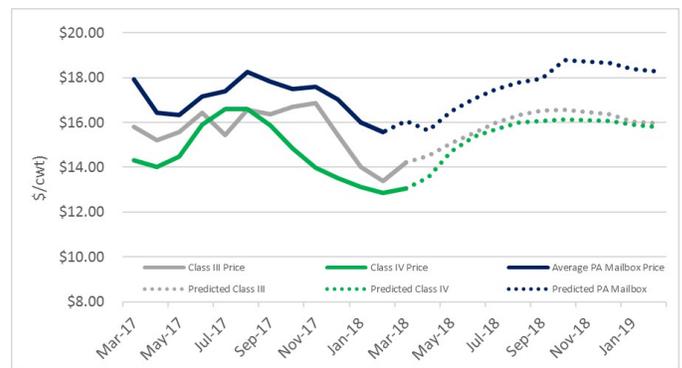
<sup>2</sup>The 3 year average actual Milk Margin breakeven in Pennsylvania from 2015-2017 was \$12.33 ± \$2.29 (\$/cwt) (Beck, Ishler, Goodling, 2018).

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



<sup>2</sup>The 3 year average actual IOFC breakeven in Pennsylvania from 2015-2017 was \$9.00 ± \$1.67 (\$/milk cow/day) (Beck, Ishler, Goodling, 2018).

**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, 2018).

**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
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	\$18.25
Sep-17	\$16.36	\$15.86	\$17.83
Oct-17	\$16.69	\$14.85	\$17.49
Nov-17	\$16.88	\$13.99	\$17.61
Dec-17	\$15.44	\$13.51	\$17.04
Jan-18	\$14.00	\$13.13	\$16.01
Feb-18	\$13.40	\$12.87	\$15.57
Mar-18	\$14.22	\$13.04	\$16.08

Apr-18	<i>\$14.51</i>	<i>\$13.55</i>	<i>\$15.65</i>
May-18	<i>\$15.07</i>	<i>\$14.72</i>	<i>\$16.50</i>
Jun-18	<i>\$15.55</i>	<i>\$15.39</i>	<i>\$17.08</i>
Jul-18	<i>\$16.01</i>	<i>\$15.72</i>	<i>\$17.49</i>
Aug-18	<i>\$16.33</i>	<i>\$16.00</i>	<i>\$17.79</i>
Sep-18	<i>\$16.55</i>	<i>\$16.08</i>	<i>\$17.95</i>
Oct-18	<i>\$16.56</i>	<i>\$16.12</i>	<i>\$18.79</i>
Nov-18	<i>\$16.46</i>	<i>\$16.11</i>	<i>\$18.73</i>
Dec-18	<i>\$16.38</i>	<i>\$16.07</i>	<i>\$18.67</i>
Jan-19	<i>\$16.05</i>	<i>\$15.90</i>	<i>\$18.41</i>
Feb-19	<i>\$15.96</i>	<i>\$15.79</i>	<i>\$18.31</i>

*\*Italicized predicted values based on Class III and Class IV futures regression (Gould, 2018).*

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, 2018)

Predicted Class III, Class IV, and Pennsylvania Mailbox Price (average of the Eastern and Western PA mailbox Price) (Gould, 2018)

Alfalfa Hay: Pennsylvania and U.S. monthly Alfalfa Hay Price (USDA, 2018)

Corn Grain: Pennsylvania and U.S. monthly Corn Grain Price (USDA, 2018)

Soybean Meal: Feed Price List (Ishler, 2018) and average of Decatur, Illinois Rail and Truck Soybean Meal, High Protein prices, National Feedstuffs (Gould, 2018).

## References

Bailey, K. and V. Ishler. “[Dairy Risk-Management Education: Tracking Milk Prices and Feed Costs](#)”. Penn State Extension. Accessed 9/20/2017.

Beck, T.J., Ishler, V.A., & Goodling, R. C. 2018. “*Dairy Enterprise Crops to Cow to Cash Project*,” the Pennsylvania State University. Unpublished raw data.

[Dairy Records Management Systems](#). “DairyMetrics Online Data Report system”. Accessed 9/14/2017.

Gould, B. 2018. “[Predicted Mailbox Prices \(Eastern Pennsylvania\)](#)”. Understanding Dairy Markets website. University of Wisconsin-Madison. Accessed 4/5/2018.

Gould, B. 2018. “[National Feedstuffs: Soybean Meal, High Protein](#)”. Summary of USDA AMS Grain Reports. Accessed 4/5/2018.

Ishler, V. “[DairyCents Mobile App](#)”. Penn State Extension. #App-1010.

Ishler, V. “[DairyCents Pro Mobile App](#)”. Penn State Extension. #App-1009.

Ishler, V. “Feed Price List”. Personal Communication. Accessed 4/5/2018.

Microsoft 2016. “[Forecast.ets function](#)”, Office Help Website.

USDA NASS, 2018. [Agricultural Prices, Quick Stats version 2.0](#). Accessed 4/5/2018.

The Dairy Outlook Newsletter is supported by an Annual USDA RMA grant.

## Authors

### David L. Swartz

Assistant Director, Animal Systems Programs  
[dls19@psu.edu](mailto:dls19@psu.edu)  
 7173855380

### Robert C. Goodling, Jr.

Extension Associate, Dairy  
[rcg133@psu.edu](mailto:rcg133@psu.edu)  
 814-863-3663

### Tim Beck

Extension Educator  
[tjb12@psu.edu](mailto:tjb12@psu.edu)  
 717-870-7702

### Virginia A. Ishler

Extension Dairy Specialist  
[vishler@psu.edu](mailto:vishler@psu.edu)

## extension.psu.edu

Penn State College of Agricultural Sciences research and extension programs are funded in part by Pennsylvania counties, the Commonwealth of Pennsylvania, and the U.S. Department of Agriculture.

Where trade names appear, no discrimination is intended, and no endorsement by Penn State Extension is implied.

### This publication is available in alternative media on request.

Penn State is an equal opportunity, affirmative action employer, and is committed to providing employment opportunities to all qualified applicants without regard to race, color, religion, age, sex, sexual orientation, gender identity, national origin, disability, or protected veteran status.

This article, including its text, graphics, and images (“Content”), is for educational purposes only; it is not intended to be a substitute for veterinary medical advice, diagnosis, or treatment. Always seek the advice of a licensed doctor of veterinary medicine or other licensed or certified veterinary medical professional with any questions you may have regarding a veterinary medical condition or symptom.

© The Pennsylvania State University 2020

