

BEFORE THE PENNSYLVANIA MILK MARKETING BOARD

OVER - ORDER PREMIUM HEARING

ALL MILK MARKETING AREAS

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Presented on behalf of the Pennsylvania Association of Dairy Cooperatives,

Dairy Farmers of America, Inc., Dairy Marketing Services, LLC,

Lanco Dairy Farms Co-op, Inc., Land O'Lakes, Inc., and

Maryland & Virginia Milk Producers' Cooperative Association, Inc.

Good morning, my name is John Rutherford. I am Director of Economics at Dairy Farmers of America - Northeast Council. Thank you for the opportunity to provide testimony this morning. My testimony is on behalf of the Pennsylvania Association of Dairy Cooperatives (PADC) whose members are: Dairy Farmers of America, Inc.; Dairy Marketing Services, Inc.; Lanco Dairy Farms Co-op, Inc.; Maryland & Virginia Milk Producers' Cooperative Association, Inc.; and Land O' Lakes, Inc., ("The Cooperatives"). Together these cooperatives represent more than one-half of the Commonwealth's dairy farmers.

This hearing was noticed in Pennsylvania Milk Marketing Board Bulletin No. 1523 regarding the setting of the over-order premium (OOP) for Class I milk for the months of October 2016 through March 2017. I will discuss various cost issues faced by Pennsylvania dairy farms. These include feed costs, margin over feed costs, and other costs related to milk production. I will also discuss recent milk prices and what futures and other forecasts predict through the first quarter of 2017.

The financial situation on Pennsylvania farms is probably best described as "tight" this year. Margins are much slimmer than in 2014, and, unfortunately, also diminished compared to 2015.

The margin over feed cost is the difference between milk income and the cost of feed to produce it. USDA publishes the all-milk price for Pennsylvania, which is the milk income number on a per hundredweight basis averaged over the state. The feed cost comes from a formula created by Bailey and Ishler from Penn State University in their paper "Tracking Margins over Feed Cost" (Exhibit 5). They call the results "Income over feed costs", but margin over feed costs or simply 'margin' are also interchangeable terms. This margin was 39.9% worse in 2015 compared to 2014. Data is available to compare the first half of 2016 with the

prior year. The margin in 2016 is down 7.2% from the first half of 2015. The Pennsylvania all-milk price averaged \$16.45, down 9.2%, while the calculated feed cost per cwt. was \$6.94, down 11.8%. This leaves an average margin per cwt. of only \$9.51 for the first half of 2016.

Feed costs represent about half of the costs of producing milk. Depending on the structure, the basic operating plan, and the equity position of a specific farm, feed costs can range from even greater to lesser significance. Feed costs are also subject to some strategic planning on the part of the farm manager. In order to maximize production, hence productive efficiency, it is important to feed sufficient amounts of high quality feed. But for cost savings, there can be a desire to feed lower quality (cheaper) feed and/or less quantity. But this decreases output per cow, reduces production efficiency, and results in lower income. This is not to say that a producer cannot be over-feeding or over-paying for forage and supplements, only that controlling feed costs is not as easy as simply feeding less tonnage or buying lower quality/cheaper feed.

USDA publishes indices of some of the other costs related to milk production. These are purchased feed, seed, fertilizer, herbicide, and machinery. Alone, each of these is a relatively minor portion of the cost of producing milk. One can get an idea of their combined impact on total farm costs by multiplying the shares of production cost that each represents by the percentage change in that index number and summing the results. I found the shares using a combination of enterprise budgets from Penn State, Iowa State, and the University of Wisconsin. Exhibit 6 shows that these other costs decreased from Q4 2015 to Q1 2016. The weighted average decline is only -4.2%, much smaller than the 17% decrease in margin over feed costs over the same quarters.

Margins during the period between October 2016 through March 2017 are likely to improve, but more because they have been so low for the past 6 months. Starting with the price of milk, it does appear that there is some relief coming for Pennsylvania dairy producers. The July World Agricultural Supply and Demand Estimates (WASDE) report from USDA predicts "...higher milk prices and lower feed costs in late 2016 and early 2017...". Recently, there has been optimism in the cheese market. Prices at the Chicago Mercantile Exchange for cheese and Class III futures have been stronger over the last two months (Exhibit 7). At their close on Friday, June 17, the cash prices for 40-pound block and 500-pound barrels of cheese were \$1.5150 and \$1.5450 per pound, respectively. Cheese futures for October 2016 to March 2017 averaged \$1.6623. On August 5 the block and barrel cash prices were \$1.8150 and \$1.8800, respectively, while the October 2016- March 2017 futures had risen to \$1.7115. Class III futures for those months moved from a \$15.73 average to \$16.26.

Pricing for butter, NFDM, and Class IV has been flat or falling over the same weeks. On June 17 the cash prices for butter and NFDM were \$2.3675 and \$0.8425 per pound, respectively. On August 5, these two prices were lower at \$2.27 and \$0.8325, respectively. Futures for butter and NFDM for the months of October 2016 to March 2017 have moved lower as well. Butter was averaging \$2.2508/lb but is \$2.1658/lb now. NFDM dropped from \$1.0662 to \$1.0086 per pound. The corresponding Class IV futures contracts were averaging \$16.25 per cwt., but have now declined to \$15.73.

If these futures prices hold up, the Pennsylvania all-milk prices for October 2016 through March 31, 2017 should be back in the \$18.50-\$19.00 range. This would be an improvement of \$2.00 to \$2.50 per cwt. both in price and to the margins. However, that still leaves our Pennsylvania farms \$0.50-\$1.00 below what they averaged over the last 10 years (Exhibit 8). In

other words, this would bring margins back towards a long-run average, or closer to what could be called “normal”.

On the cost side, there is only slight improvement. Corn futures for December 2016 and March 2017 are 24.5 and 7 cents, respectively, below where they closed in the prior year (Exhibit 9). If basis (the difference between the price at the CME and the price in Pennsylvania) remains the same as the prior year, this would foretell lower prices for corn in Pennsylvania. However, basis moved very differently from May to June of 2016 than in the previous year. Last year it decreased (\$0.395) whereas this year the basis increased (\$0.60). Given weather patterns I will discuss later, I expect the next USDA report on Agricultural Prices (to be released August 31) will confirm this trend. It is entirely plausible that an increase in the local basis will override the price decrease that the CME currently predicts, leaving Pennsylvania producers with higher corn prices.

Looking at the soybean complex, we see prices similar to the spring (Exhibit 10). The price of soybeans over its trading months of November 2016, January 2017, and March 2017 averages slightly higher (+1.5%) than the average from Spring 2016. Soybean meal futures trade in October 2016, December 2016, January 2017, and March 2017. The prices for these contracts are averaging the same as what prices were at the beginning of this year. So, looking at the soybeans in either form, the price outlook is similar to what we had earlier in February-to-April this year.

Alfalfa hay price is the final remaining crop in the feed costs formula. There is no futures market for alfalfa hay, but we can review the trend in USDA’s monthly cost for alfalfa hay in Pennsylvania. The cost declined from \$215 /ton in January 2016 to \$189/ton in April. Then in May the price rose to \$198/ton before falling to \$166/ton in June. With this variability, it is hard

to establish a trend to predict where alfalfa hay prices are going. Comparing the first half of 2015 with the first half of 2016, we do find the price averages \$38 (16%) less than a year ago.

Summarizing the feed price situation, for October 2016 through March 2017 we should expect a similar-to-possibly-higher corn price, a similar soybean or soybean meal price, and possibly a lower alfalfa hay. Together these would add more improvement to dairy farm margins.

Up to this point, the outlook for milk and feed prices point to a normalization of margins for Pennsylvania dairy farmers. Milk price looks to improve by at least a couple dollars per hundredweight with feed prices ratcheting slightly lower. However, the feed situation is in jeopardy of interruption by a threatening weather event. At the time of writing this testimony we are at a critical point in the growing season for corn, soybeans, and late cuttings of alfalfa hay. We also are facing the growing likelihood that Pennsylvania crops will be affected by the dry conditions affecting most of the Northeast this year. Exhibit 11 shows the most recent map of conditions across Pennsylvania. The map shows that approximately two-thirds of the state is at least “Abnormally Dry”, while half of that area is classified as “Moderate” or “Severe” drought. The table in the upper right of the exhibit gives the percentages of the state falling into each condition category for the reported week, plus various weeks back. While it is true that there was much improvement over the state when compared to Last Week, it should also be noted that the line titled “One Year Ago” shows there were no dry conditions in the state this week in 2015.

Drought years can affect feed costs in two ways. First, is the obvious higher price because the supply of high quality feed is reduced. But second is that the farm is expecting to produce some quantity of feed on its own land. When that yield is reduced, now the farm has to buy in additional supplies, at the higher cost. In addition to competing with other farmers to buy

feed to replace what could not be harvested at home, there are costs of transporting the supplemental feed back to the farm from more distance locations.

Weather conditions affect crops differently depending on the stage of growth and whether or not necessary moisture is available at the right times. The weekly Crop Progress (Exhibit 12) report from USDA says that as of August 7, 2016, 91% of the Pennsylvania corn crop had reached silk stage, versus 88% a year ago. However, only 37% has come to dough stage, compared to 50% at this time last year and none has dented in 2016, while 8% had done so in 2015. When the total crop is segmented into Excellent/Good/Fair/Poor/Very Poor, 12% of the Pennsylvania corn is considered Poor or Very Poor while 59% is deemed Good or Excellent. Compare this to the same time in 2015 when 4% was Poor or Very Poor and 77% was Good or Excellent. It is too early to say the status can't reverse, but maturation of the corn plants appears to be retarded in 2016.

Since Pennsylvania is not a state that USDA monitors for soybeans, we can move to alfalfa hay. Pasture and range conditions, which are included in the Crop Progress report, can be used as a proxy for the condition of hay fields. In Exhibit 13, I have compared the Pennsylvania situation as of August 7, 2016, and one year earlier. The dry conditions at this time put 41% of the pasture and range at Poor or Very Poor. Last year only 17% of pasture and range land in Pennsylvania was given this rating. While other factors are also important in the yield of hay, it is still likely that the weather of 2016 will reduce the availability of high quality alfalfa hay in Pennsylvania. This would result in higher prices for the hay dairy producers feed to lactating cows.

Summary

Expectations are that the worst of the milk price downturn is over, leaving us with improved prices going through the end of 2016 and likely through the first quarter of 2017. The improvement in prices should get the Pennsylvania all-milk price back near, but still below the long term average. However, this improvement would only bring margins over feed cost closer to a more normal level.

Feed costs are the wildcard looking to the future. The current market expectation, judging from futures markets, is for grain prices to be similar or down slightly compared to 2015. All we can tell about hay is that the price has moved lower recently. These outcomes would maintain the feed margins at a comfortable level for dairy producers. However, as days pass without rainfall, there is growing potential for damage to crops, in either quality or yield, which are needed for feed into the next year. If there is damage and it is widespread, Pennsylvania dairy farmers will have to spend much more to secure the necessary quantity and quality of feed to maintain milk production. Higher feed prices would offset at least a portion of the increases in milk price, suppressing margins more like the first half 2016.

Since the best outcome expected is only for margins to move closer to a long term average, but with a possibility this could be eroded by higher feed costs, The Cooperatives request maintaining the OOP at the \$1.60 level for the period of October 1, 2016 through March 2017.