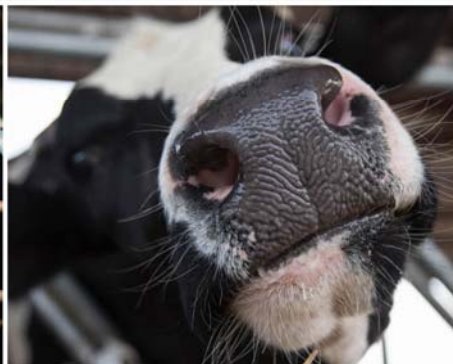


DAIRY INDUSTRY OUTLOOK



Introduction

As Pennsylvania's premier agricultural lender, it is the business philosophy of AgChoice Farm Credit to continually research and evaluate the industries we serve, assess risk and make sound lending and business decisions. The **Dairy Industry Outlook** has been developed to provide insight and guidance on Pennsylvania's dairy industry.

Date Prepared: May 11, 2020

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Dairy Industry Outlook

Date Prepared: May 11, 2020

Executive Summary

As we prepare this industry Outlook, we can say **the world is experiencing something most of us have never seen: A global pandemic, COVID-19.**

When we started preparing this outlook back at the beginning of 2020, we had a very positive outlook. We predicted higher milk prices and a good year for dairy businesses. Then the pandemic hit. We delayed benchmarks; the outlook and commodities took a hit. Our outlook for the dairy industry changed and we are anticipating a much lower milk price year, another 2009 for those who remember it.

U.S. 2019 Year

- Consolidation and attrition quicken
- Dairy herd shrunk 0.7% to 9.336 million cows
- Average herd size increased 8.9% to 273
- Total milk production increased 0.4% to 128.382 billion pounds
- Milk per cow increased 1.0% to 23,391 pounds
- Licensed dairy herds decreased 8.8% to 34,187
- Marketing expenses continue to increase
- Producers made a small profit and had tight cash flow

Multiyear Trend

- Increasing milk prices over time (Exhibit 4)
- Increased cow numbers per farm and milk sold per cow
- Increased costs
- Stagnant profits
- Capital purchases continue to increase per cow regardless of milk price outlook

Looking Ahead

- U.S. dairy industry remains a world player
- Northeast continues to have major role in domestic and global supply
- Liquidity more important to ride cycles
- Tight margins
- Greater need for risk management implementation
- Technology will drive innovation
- Access to markets a key

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PA Projections

	2020	Typical Yr.
PA Milk Price	\$17.25	\$18.25
EBITDA per Cow	\$425	\$862
Gross Margin	30%	36%
Overhead as % of Milk Income	35%	29%
Net Income per Cow	-\$431	\$184
Net Income per Cwt.	-\$1.73	\$0.73
Net COP	\$18.98	\$17.52
Breakeven COP	\$19.53	\$17.83

Note: These prices vary slightly from Exhibit 1 as these are for PA and Exhibit 1 is based on Northeast

Projections can be summarized as follows:

- 2020
 - Milk price: \$1.50-\$2.00 lower than 2019, or \$0.00-\$1.00 lower than the five-year average price
 - EBITDA per cow: \$650 lower than 2019, or \$300 lower than the five-year average
- Typical year
 - Milk price: \$0.25-\$0.50 higher than the five-year average
 - EBITDA per cow: At the three-year average level or \$100 higher than five-year average

History shows that producers will continue to replace capital even during low market cycles. The anticipated cash flows of the average producer will not allow for significant capital replacement without borrowing funds for said purchases during 2019. In the future, cash flow challenges during recovery will still force farms to borrow to fund capital replacement.

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Dairy Industry Outlook

As we prepare this industry Outlook, we can say **the world is experiencing something most of us have never seen: A global pandemic, COVID-19**. This has caused many changes in the way we all carry out our jobs and lives. Non-essential businesses are forced to stay shut, we live under stay at home orders and social distancing. Essential businesses are operating virtually and with limited human contact. The economy has all but shut down and we are in a major recession. This pandemic changed the outlook on many things. Will businesses be able to survive the shut down? Will individuals all have their jobs when we reopen the economy?

When we started preparing this outlook back at the beginning of 2020, we had a very positive outlook. We predicted higher milk prices and a good year for dairy businesses. Then the pandemic upended global commodity markets. Our outlook for the dairy industry changed and we are anticipating a much lower milk price year, another 2009 for those who remember it.

To be viable long term, businesses need to generate:

- Positive cash flow
- Profits that allow re-capitalization of the business and provide a return to ownership and management

Price volatility (inputs and outputs) and weather can hamper producers' ability to achieve both. Price risk emphasizes the importance of long-term business planning by dairy managers. Accessing only one year may not tell the whole picture. It is necessary to look at a multiyear average of at least three years.

Multiple tables in this document support the statements made in the Dairy Outlook. The statements made in the Outlook are the expressed opinion of AgChoice Farm Credit, and AgChoice assumes no responsibility or liability to any third party for the reports or recommendation contained herein. The success of any individual, business or organization is solely their responsibility.

2019 Year

The dairy industry continues to be a global industry and experienced the highest prices since 2014. "Consolidation and attrition pick up Speed" was the title of an article Dave Natzke of Progress Dairy used in his summary of U.S. dairy statistics, which was a good way to summarize the industry at the end of 2019.

U.S. dairy statistics for 2019 (see Table 1 for more details):

- Dairy herd shrunk 0.7% to 9.336 million cows
- Average herd size increased 8.9% to 273
- Total milk production increased 0.4% to 128.382 billion pounds
- Milk per cow increased 1.0% to 23,391 pounds
- Licensed dairy herds decreased 8.8% to 34,187

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Milk prices rebounded during the second half of 2019 bringing the average Class III price to \$16.96/cwt, more than three dollars higher than the low of \$13.89/cwt farms experienced in February of 2019. The 2019 Class III price was the 7th highest since 2001 and had the fifth largest swing of \$6.56/cwt from the February low to a high of \$20.45/cwt in November.

The top 23 dairy states, by milk production, only saw minor changes with all 23 being the same states as last year. Pennsylvania remained #7 and New York stayed at #4. The top five states continue to be California, Wisconsin, Idaho, New York, and Texas. More detail on the top 23 can be found in Exhibit 2.

The EU and U.S. continue to be the top two milk-production regions globally, although Oceania (New Zealand and Australia), China, Russia, Argentina, India and other regions have a big impact on the world supply and demand.

Table 1 – U.S. Dairy Industry Growth

	2009	2018	2019	% Change 1-year	% Change 10-years	10-year CAGR*
Total Production (in Millions of Lbs.)	189,202	217,575	218,382	0.37%	15.42%	1.44%
Number of Cows (1000 head)	9,204	9,399	9,336	-0.67%	1.43%	0.14%
Milk per Cow (lbs. per year)	20,561	23,149	23,391	1.05%	13.76%	1.30%
Number of Licensed Dairies	54,,932	37,468	34,187	-8.76%	-37.76%	-4.63%
Average Herd Size	168	251	273	8.76%	62.50%	4.97%

*CAGR: Compound Annual Growth Rate

Exports are a key part of the U.S. dairy industry and are tied to the world markets (i.e. strength of the dollar, trade policies, etc.). Total U.S. exports increased for the third consecutive year. Mexico continues to be the country purchasing the most dairy products from the U.S. with Canada and China continuing to be number two and three. South Korea and Japan round out the top five.

Some U.S. regions continued to see growth, but 2019 resulted in an overall decrease in farms nationally. Total licensed dairies declined by 3,281 with New York losing 310 and Pennsylvania falling by 470. Wisconsin had the largest number of dairies exit the industry with a total of 780 herds leaving. However, New York and Wisconsin saw total milk production increase, while Pennsylvania saw a 5.2% decrease in total milk production. Tables 2 through 8 below summarize some of the regional changes as well as more specific data for New York and Pennsylvania.

Table 2 – Pennsylvania and New York

	PA	NY
Ranking in Total Production	7	4
Ranking in Number of Licensed Dairies	2	3
Ranking in Average Herd Size	46	31
# of Counties in the Top 100 Dairy Counties (based on May 2019 milk production)	4	10

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Table 3 – East¹ Region Dairy Industry Growth

	2009	2018	2019	% Change 1-year	% Change 10-years	10-year CAGR
Total Production (in Millions of Lbs.)	42,946	45,537	44,541	-2.19%	3.71%	0.37%
Number of Cows (1000 Head)	2,324	2,130	2,059	-3.33%	-11.40%	-1.20%
Milk per Cow (Lbs. per Year)	18,479	21,379	21,632	1.19%	17.06%	1.59%
Number of Licensed Dairies	22,395	16,505	15,060	-8.75%	-32.75%	-3.89%
Average Herd Size	104	129	137	5.94%	31.75%	2.80%

1) East Region: Alabama, Arkansas, Connecticut, Delaware, Florida, Georgia, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Mississippi, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, & West Virginia

Table 4 – Midwest² Region Dairy Industry Growth

	2009	2018	2019	% Change 1-year	% Change 10-years	10-year CAGR
Total Production (in Millions of Lbs.)	59,305	72,303	72,493	0.26%	22.24%	2.03%
Number of Cows (1000 Head)	2,971	3,083	3,059	-0.78%	2.96%	0.29%
Milk per cow (Lbs. per Year)	19,961	23,452	23,698	1.05%	18.72%	1.73%
Number of Licensed Dairies	27,680	17,335	15,705	-9.40%	-43.26%	-5.51%
Average Herd Size	107	178	195	9.52%	81.47%	6.14%

2) Midwest Region: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, & Wisconsin

Table 5 – Southwest³ Region Dairy Industry Growth

	2009	2018	2019	% Change 1-year	% Change 10-years	10-year CAGR
Total Production (in Millions of Lbs.)	61,953	68,021	68,863	1.24%	11.15%	1.06%
Number of Cows (1000 head)	2,886	2,883	2,888	0.17%	0.07%	0.01%
Milk per Cow (Lbs. per Year)	21,467	23,594	23,845	1.06%	11.08%	1.06%
Number of Licensed Dairies	3,025	2,147	2,025	-5.68%	-33.06%	-3.93%
Average Herd Size	954	1,343	1,426	6.21%	49.49%	4.10%

3) Southwest Region: Arizona, California, Hawaii, Nevada, New Mexico, Oklahoma, & Texas

Table 6 – Northwest⁴ Region Dairy Industry Growth

	2009	2018	2019	% Change 1-year	% Change 10-years	10-year CAGR
Total Production (in Millions of Lbs.)	24,971	31,714	32,481	2.42%	30.07%	2.66%
Number of Cows (1000 Head)	1,151	1,303	1,331	2.15%	15.64%	1.46%
Milk per Cow (Lbs. per Year)	21,695	24,339	24,403	0.26%	12.48%	1.18%
Number of Licensed Dairies	1,825	1,481	1,395	-5.81%	-23.56%	-2.65%
Average Herd Size	631	880	954	8.45%	51.28%	4.23%

4) Northwest Region: Alaska, Colorado, Idaho, Montana, Oregon, Utah, Washington, & Wyoming

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Table 7 – Pennsylvania Dairy Industry Growth

	2009	2018	2019	% Change 1-year	% Change 10-years	10-year CAGR
Total Production (in Millions of Lbs.)	10,551	10,665	10,108	-5.22%	-4.20%	-0.43%
Number of Cows (1000 Head)	550	519	490	-5.59%	-10.91%	-1.15%
Milk per Cow (Lbs. per Year)	19,360	20,549	20,629	0.39%	6.55%	0.64%
Number of Licensed Dairies	7,400	6,200	5,730	-7.58%	-22.57%	-2.53%
Average Herd Size	74	84	86	2.38%	16.22%	1.51%

Table 8 – New York Dairy Industry Growth

	2009	2018	2019	% Change 1-year	% Change 10-years	10-year CAGR
Total Production (in Millions of Lbs.)	12,424	14,882	15,122	1.61%	21.72%	1.98%
Number of Cows (1000 Head)	625	623	627	0.64%	0.32%	0.03%
Milk per Cow (Lbs. per Year)	20,071	23,888	24,118	0.96%	20.16%	1.85%
Number of Licensed Dairies	5,480	4,190	3,880	-7.40%	-29.20%	-3.39%
Average Herd Size	114	149	162	8.72%	42.11%	3.58%

The Northeast Market Administrator reported the class utilization in the Northeast as follows:

- Class 1: 31.0%
- Class 2: 23.9%
- Class 3: 26.8%
- Class 4: 18.3%

These are all down from 2018 except Class 4, which reported the second highest ever since the Order’s inception. This continues to impact the pay our producers receive since Class 4 has the lowest pay prices.

While Class III varied by over \$6.00 during 2019, the PA All Milk Price only swung \$3.67/cwt indicating that the basis PA producers received over the Class III price decreased as Class III prices rebounded. The PA basis has not be above \$2.00 since June 2019.

The implementation of the new formula for Class I pricing in May 2019 that uses the average of the Advanced Class III and Class IV Skim Milk Pricing Factors rather than the higher of the two may have affected the shrinking of the basis, as butter prices dropped pulling the average \$1.40/cwt lower compared to what the previous model would have posted. This is not the norm, however, and producers that follow the history will see that when the two models are compared over the last 18 years, the new model would have resulted in lower prices only a little more than a third of the time¹.

¹ Guess, John. 3 December 2017. Blog Post. “The Proposed Change in the Class I Price Formula-Is it Good for Producers?” <http://milkprice.blogspot.com/2017/12/the-proposed-change-in-class-i-price.html>. Accessed 20 January 2020.

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Producers will feel this impact as well as the shift in milk utilization from a fluid market in the northeast to other process products has also impacted the Producer Price Differential (PPD) in the region. The PPD for producers selling to Mt. Holly Springs, PA in December 2018 had a PPD of \$2.04/cwt whereas a year later the PPD turned negative to (\$0.54/cwt) as less of the milk produced in the Northeast is going to fluid milk.

Pennsylvania dairies have learned the reality of relying on a fluid milk market over the last five years as consumers continue to demand dairy products, just not in the form of fluid milk. Producers must drive production efficiencies or pivot to new or niche markets that capitalize on value added products or production practices.

Production efficiencies through economies of scale are more difficult to achieve due to base systems or production limitations placed on farms by cooperatives to help balance supply. However farms looking to expand still have options if approached the right way. As states across the country saw, smaller farms suffered the losses of the past five years more acutely than larger farms. Growth in the commodity market is still available for farms willing to expand at scale.

Also affecting basis, milk handlers in the Northeast continued to charge additional balancing and hauling fees to move the excess milk. Base systems implemented by handlers became the norm for Northeast operators as additional handlers began implementing systems.

Components should continue to be a focus for our producers. Shipping more pounds of energy corrected milk (ECM) is a way to control marketing expenses to ship more solids and less water.

*As quality and other premiums and basis continue to tighten, producers in the Northeast must **reduce their average cost of production closer to Class III prices** to remain competitive.*

In Pennsylvania, most producers made a small profit but had tight cash flows in 2019. Catching up from 2018 losses made it difficult to rebuild cash reserves, and uneven forage qualities made managing feed costs a challenge while maintaining production levels. We did see inventories increase as the 2019 growing season was more favorable than 2018, providing better forage quality and stronger feed inventories that should drive production and/or decrease feed expenses in 2020.

Business recapitalization continues to be significant. During 2019, we continued to see producers investing in their operation. The amount per cow has not been determined at this time since COVID-19 has delayed benchmark gathering and reporting. We are anticipating the amount being similar to historical levels and coming in around \$810 per cow.

Fear of losing a market continued in 2019. Market consolidation and over supply of milk created more concerns when a major processor declared bankruptcy midway through the year. Producers need to work more closely with their handler to know who their market is, what the handler wants, what financial condition the handler is in, and what alternatives are available. Counterparty risk is a greater concern for the dairy industry.

What is counterparty risk?

“The risk that the person/institution with whom you have entered a financial contract – who is a counterparty to the contract – will default on the obligation and fail to fulfill that side of the contractual agreement.”

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EBITDA (Earnings Before Interest, Taxes, Depreciation and Amortization, and owner draws/living)

AgChoice frequently uses the EBITDA per cow calculation for projections, efficiency measurements and benchmarking. When making projections, the individual expense items are sometimes difficult to project; however when using EBITDA, we can predict future cash flows without ‘splitting hairs’ over the individual expense categories. Before using the EBITDA projections stated in this report, it is important to compare a customer’s average EBITDA to the averages in this report and adjust projected EBITDA accordingly. Example: Producer has five-year EBITDA per cow of \$763 (\$100 below 5-Year database average); thus, EBITDA per cow projected for producers should be \$100 below the typical year recommended level, or \$862 per cow assuming no other changes to operation.

In 2019, the estimated (COVID-19 has delayed benchmarks) EBITDA per cow of producers’ is \$1,084, which is an increase of \$487 per cow from 2018. The three-year average EBITDA per cow is \$853, the five-year is \$767, and the 10-year is \$839. **The gap between the top and bottom continues to widen.** Top producers in our industry significantly outperformed their counterparts in the average and bottom categories. Exhibit 7D and Exhibit 8D look at EBITDA per cow trends in Pennsylvania and the Northeast through 2019.

Multiyear Trend

As stated earlier, looking at the dairy industry or an operation over a multiyear period provides a more accurate picture of the farm’s overall business health. The multiyear analysis does not eliminate the roller coaster, but trends show:

- **Increasing milk prices over time** (Exhibit 4)
- **Increased cow numbers per farm and milk sold per cow**
- **Increased costs**
- **Stagnant profits**

In the short-term, during the past five years, milk prices declined. That trend created the stress in the industry today. Some operations showed profits during this time, but recapitalizing the business increased debts for losses and capital in 2018 without much progress in 2019.

Since the high milk prices of 2014, cow prices have declined. Exhibit 9 illustrates this trend. The five-year average price for dairy cows is approximately \$1,127 per head as of this writing, while the three-year average is \$916 and most recent 12 months is \$758. When analyzing dairy operations, AgChoice supports the base value method for dairy livestock values and encourages the values to be based close to the three-year average price.

Will these trends continue? There are factors that are not easily predictable. Will the value of the U.S. dollar strengthen or weaken? Will exports grow? Exports have played a key role in the increased profitability, but strong demand in the U.S. has been and will continue to be the major driver.

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During the past 15 years, we could say that both net cost of production (profitability) and the breakeven cost of production (cash flow) have improved over time. However, this is mostly due to volatility and the extreme highs followed by extreme lows (i.e. 2009 low and 2014 high). The shorter-term trend (three to 10 years) shows that **net margin, or profitability, is flat over time**. Both milk prices and costs have increased over time. Producers are forced to find ways to be more efficient with labor, capital and feed. The top producers look at ways to control these costs, and over time, **they have gained efficiencies and marginal milk that have kept the Cost of Goods Sold (COGS -- variable costs) at 62-63% of Gross Milk income. Overhead (fixed costs) has also been constant over time at around 26-30% of the milk check.**

EBITDA per cow has been fairly flat over a longer period (See Exhibit 8D). The 10 year trend is down while the five year trend is up slightly. Thus, when working with the typical operation and looking at a shorter-term trend, **we need to be careful when using the five-year EBITDA per cow, and should use an EBITDA per cow from either a longer period or use the current three-year average which is more similar to the 10 year trend.**

Capital spending continues at higher levels than most of us realize or project. What have they been historically through 2018?

- Three-year average: \$795/cow or 6.5% of total assets
- Five-year average: \$774/cow or 6.2% of total assets
- 10-year average: \$776/cow or 6.3% of total assets

The categorical breakdown of capital purchases can be summarized as follows:

- 20% Real estate
- 25% Improvements
- 48% Machinery, equipment and vehicles
- 2% Breeding livestock
- 5% Other

The lowest level during the past 10 years was \$444 per cow in 2009 while the highest was in 2014 at \$1,066 per cow.

How are these purchases being funded? Some are funded with cash flow/profits, but most are purchased with re-borrowed principal. **The average farm is spending on capital items (land, equipment, buildings, etc.) at a faster rate than realizing profits.** Consequently, operations are increasing the need for cash flow to make payments, and cash reserves are harder to build in average years.

Looking Ahead for 2020

The U.S. dairy industry remains a world player through expanding emerging markets and reasserting its position with traditional trade partners such as Mexico, Canada, Japan and China. The trend to larger, more efficient operations will continue. **The Northeast with its proximity to markets and population is positioned to capitalize on these advantages.** However, dairy producers in the Northeast will need to work on lowering their cost of production to make purchasing local more cost effective than transporting cheaper milk from the Midwest and Western U.S.

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Worrying about cost of production is not just for Northeast producers. All producers should be concerned for long-term viability. Producers also need to strengthen their liquidity positions, especially after the last two marginal years with continued high capital investment rates. With debt per cow increasing during the past two years, producers should consider how to lower overall debt starting with operating debt and establishing a cash reserve.

Pennsylvania remains one of the top dairy producing states. Still, the state is below average in milk shipped per cow, has a higher cost of production, and one of the highest debt per cow. While the state's higher land values do impact the debt per cow, Pennsylvania must increase energy corrected milk shipped per cow to lower the overall cost of production and drive earnings to support the higher debt levels and remain a top dairy production state. Critics claim more milk will impact the macroeconomics of the industry; however at the farm level the marginal milk production is the most profitable milk to produce, and is what Pennsylvania farms need to return to competitive cost of production.

Apart from our current global health crisis, we should not minimize the emotional toll the last few years have taken on dairy farms. AgChoice has introduced a new service called the Member Assistance Program (MAP) for its customer owners to help support the emotional health of farms. The challenges of managing a farm have not disappeared during Covid-19. In order for farm managers to address the stress it's important to rely on friends, family, and community networks to help when faced with business pressures or anxiety. AgChoice Customers can call 1-800-633-3353 for free, confidential help for personal, work-related and family concerns.

What does the future hold?

- Price volatility will be driven by large farms' ability to manage price risk and respond to increased futures prices and the U.S. dairy supply's ability to find new or expanded export markets.
- Farms looking long-term will prioritize working capital and invest in long-term assets that build efficiency
- Producers need cost of production at Class III prices to be competitive
- Positive environmental impact will be a focus for domestic demand growth
 - Farms' handling of nutrient management and water quality will drive local consumers' interests in sustainable production
- Animal welfare issues will increase the need for implementing better management practices
- Operations will grow (increased output and/or increased cow numbers) or diversify
- Consolidation of the industry will continue
- Transitions will continue (Some farms will exit dairy and others will transition ownership)
- Cost of raw materials/inputs will increase
- Operating, capital, and labor efficiencies will be critical to profitability
- Need for knowledge and improving producers' business skills will grow
- Advocacy with local, state and national government should be a priority
- Labor (availability, immigration, benefits) will continue to be a concern for producers
 - Farm managers will need to make Human Resources as high a priority as production inputs and acres

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- Expansion into robotics to counter labor issues will creep into more everyday tasks
 - Farms may not be able to expand into major shifts of labor, but small improvements in technology will enable farms to invest in higher value employees
- Global demand will impact markets at an even higher level
- Risk management will be critical for all farms but highly-leveraged farms may be needed to insure income and input costs

The industry will continue to be a tight market. For 2020, COVID-19 will have a big impact. Demand is down with schools closed, and restaurants limited to curb side/drive-thru services. Even if we get back to a more normal in 2020, depressed demand in the first half of the year will drive lower prices overall in 2020.

When day-to-day life returns to a new normal, we should expect more of the same historical trends. Prices will fluctuate on roughly a three-year cycle, and these cycles will average more along the lines of our current five-year prices.

Margins will be tight, and producers need to implement more risk management. Although risk management tools cannot be considered a primary source of income, Dairy Margin Coverage (DMC), Livestock Gross Margin (LGM), Dairy Revenue Protection (DRP), forward contracting/hedging or options can help producers protect their milk income. DMC and LGM-Dairy also protect feed cost volatility by insuring the dairy margin not simply milk income. Producers in the Northeast have lagged behind other regions in adopting these tools after years of managing to the market. However, as the markets become more volatile – higher highs and lower lows, and the long periods between market recovery as seen in the past five years – farms may be able to see the benefits of smoothing out the peaks and valleys of the milk market.

DRP offers milk price floors at reduced rates through Farm Bill support from the Risk Management Agency (RMA USDA). Farms should understand their cost of production and their ability to withstand price risk to be able to make informed decisions about what level of coverage is right for them. At the start of 2020, few farms could afford to risk even a small retrenching of milk prices.

As milk price futures have plummeted in months since the start of the year, farm managers should use this opportunity to develop a sound risk management plan to take advantage of recoveries in over longer-term markets three to five quarters away.

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Projections

Table 9 includes projections for 2020 and a Typical Year. Primary assumptions for projections are driven from CME prices as of the date of this Outlook, the Pennsylvania 10-year Class III basis, percentage COGS, overhead and moderate increased milk sold per cow.

2020 will be a tough year for producers with the average producer experiencing a loss. The gross milk price in Pennsylvania is anticipated to decrease \$1.50-\$2.00 from 2019. Cash flows will most likely be negative, and producers will need additional operating loans to get through the year. The higher debt per cow may require some refinancing or restructuring of debt to maintain a reasonable cash flow. Capital spending should be reduced in the short term to help reduce the cash outflow needs. Once we return to a more typical year, cash flows will be positive before capital purchases, and the average operation should have a profit.

Based on the above assumptions, Table 9 summarizes current projections.

Table 9 – Pennsylvania Projections

	2020	Typical Yr.
PA Milk Price	\$17.25	\$18.25
EBITDA per Cow	\$425	\$862
Gross Margin	30%	36%
Overhead as % of Milk Income	35%	29%
Net Income per Cow	-\$431	\$184
Net Income per Cwt.	-\$1.73	\$0.73
Net COP	\$18.98	\$17.52
Breakeven COP	\$19.53	\$17.83

Note: These prices vary slightly from Exhibit 1 as these are for PA and Exhibit 1 is based on Northeast

Projections can be summarized as follows:

- 2020
 - Milk price: \$1.50-\$2.00 lower than 2019, or \$0.00-\$1.00 lower than the five-year average price
 - EBITDA per cow: \$650 lower than 2019, or \$300 lower than the five-year average
- Typical year
 - Milk price: \$0.25-\$0.50 higher than the five-year average
 - EBITDA per cow: At the three-year average level or \$100 higher than five-year average

History shows that producers will continue to replace capital even during low market cycles. The anticipated cash flows of the average producer will not allow for significant capital replacement without borrowing funds for said purchases.

Date Prepared: May 11, 2020

Table 10 below summarizes a projection for the average Pennsylvania producer’s cash flow based on our projected assumptions in Table 9 and Exhibit 1 for the Northeast.

Table 10 – Average Producer’s Projected Cash Flow

	2020 Per Cwt	2020 Per Cow	Typical Yr. Per Cwt	Typical Yr. Per Cow
PA Gross Milk Income	\$17.25	\$4,354	\$18.25	\$4,643
Farm Expenses Less Non-Milk Income	\$15.57	\$3,929	\$14.86	\$3,781
EBITDA	\$1.68	\$425	\$3.39	\$862
Owner Living or Draws	\$0.70	\$177	\$0.70	\$178
Principal and Interest	\$2.50	\$631	\$2.50	\$636
Net Residual Income	-\$1.52	-\$383	\$0.19	\$48
Breakeven Milk Price Before Capital Purchases	\$18.77	\$4,812	\$18.06	\$4,595
Capital Purchases	\$1.58	\$400	\$3.14	\$800
Net after capital purchases	-\$3.10	-\$783	-\$2.95	-\$752

Note: These prices vary slightly from Exhibit 1 as these are for PA and Exhibit 1 is based on Northeast

As always, when making individual producer projections, historical performance should be compared to information in Exhibit 1, and adjustments made accordingly. Example: Producer has five-year EBITDA per cow of \$763 (\$100 below 5-Year database average); thus, EBITDA per cow projected for producers should be \$100 below the typical year recommended level, or \$862 per cow assuming no other changes to operation.

Dairy Industry Outlook

Date Prepared: May 11, 2020

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Exhibit 1 Historical Key Performance Indicators & Projections

Date Prepared: May 11, 2020

Key Performance Indicators	Goals	2018	Est. 2019	Averages			Projections		
				3-Year Average	5-Year Average	10-Year Average	2020	2021	Typical Year
PA Milk Price		\$ 16.87	\$ 19.16	\$ 18.23	\$ 18.07	\$ 19.78	\$ 17.25	\$ 18.25	\$ 18.25
All U.S. Milk Price		\$ 16.18	\$ 18.60	\$ 17.47	\$ 17.15	\$ 18.47	\$ 16.75	\$ 17.75	\$ 17.75
Northeast Milk Price		\$ 17.19	\$ 19.21	\$ 18.25	\$ 17.96	\$ 19.56	\$ 17.00	\$ 18.00	\$ 18.00
Northeast Milk Sold per Cow		25,264	25,241	25,333	25,136	24,298	25,000	25,200	25,200
Northeast EBITDA:									
EBITDA per Cow		\$ 597	\$ 1,084	\$ 863	\$ 767	\$ 991	\$ 425	\$ 862	\$ 862
EBITDA per Cwt.		\$ 2.36	\$ 4.29	\$ 3.41	\$ 3.05	\$ 4.11	\$ 1.70	\$ 3.42	\$ 3.42
EBITDA as % of Milk Income		13.7%	22.4%	18.7%	17.0%	21.0%	10.0%	19.0%	19.0%
Northeast Liabilities:									
Total Liabilities per Cwt.	< \$20.00	\$ 16.85	\$ 16.74	\$ 16.18	\$ 16.04	\$ 15.03			
Principal & Interest Payments per Cwt.	< \$2.50	\$ 2.59	\$ 2.54	\$ 2.51	\$ 2.46	\$ 2.42			
Principal & Interest Payments per Cow		\$ 655	\$ 641	\$ 635	\$ 618	\$ 589			
Working Capital per Cow	> \$1,000	\$ 1,087	\$ 825	\$ 982	\$ 1,009	\$ 1,109			
Capital Purchases Per Cow		\$ 802	\$ 810	\$ 795	\$ 774	\$ 776	\$ 500	\$ 800	\$ 800
Capital Purchases as % of Total Assets		6.6%	6.7%	6.5%	6.2%	6.3%			
Northeast Gross Revenue:									
Milk Income per Cow		\$ 4,344	\$ 4,850	\$ 4,623	\$ 4,514	\$ 4,742	\$ 4,250	\$ 4,536	\$ 4,536
Northeast Efficiency:									
Gross Margin as % of Milk Income		28.8%	36.1%	33.2%	32.8%	35.8%	30.0%	33.0%	33.0%
Operating Efficiency -- Operating Expense Ratio ¹		88.3%	80.5%	84.0%	85.6%	82.1%			
Capital Efficiency -- Asset Turnover Ratio ²		41.0%	46.1%	43.3%	41.8%	45.8%			
Debt Efficiency -- Total Debt/EBITDA	< 400%	713.1%	389.8%	477.7%	517.2%	373.0%			
Northeast Capacity:									
Overhead as % of Milk Income		29.0%	30.4%	29.0%	29.5%	27.1%	35.0%	30.0%	30.0%
Northeast Profitability:									
Net Income per Cow		\$ (7)	\$ 275	\$ 194	\$ 150	\$ 408	\$ (213)	\$ 136	\$ 136
Net Income per Cwt.		\$ (0.03)	\$ 1.09	\$ 0.76	\$ 0.59	\$ 1.71	\$ (0.85)	\$ 0.54	\$ 0.54
Return on Assets	> 6%	1.5%	3.9%	3.1%	2.5%	4.6%			
Return on Equity	> 6%	-0.1%	3.4%	2.3%	1.7%	4.8%			
Northeast Liquidity:									
Current Ratio	> 2.00	2.48	1.87	2.12	2.36	2.43			
Working Capital as % of Farm Income ³	> 20%	21%	15%	18%	21%	19%			
Northeast Solvency:									
% Equity	> 60%	66%	65%	67%	69%	70%			
Debt to Asset	< 40%	34%	35%	33%	31%	30%			
Northeast Repayment Ability:									
Total Debt Coverage Ratio ⁴	> 150%	48%	100%	84%	80%	125%			
Northeast Other:									
Net Cost of Production per Cwt. ⁵		\$ 17.22	\$ 18.13	\$ 17.49	\$ 17.36	\$ 17.84	\$ 17.85	\$ 17.46	\$ 17.46
Breakeven Cost of Production per Cwt. ⁶		\$ 17.78	\$ 18.41	\$ 17.92	\$ 17.82	\$ 18.35	\$ 18.40	\$ 18.01	\$ 18.01
Feed and Crop Cost per Cow		\$ 1,916	\$ 1,939	\$ 1,918	\$ 1,941	\$ 1,974	\$ 1,785	\$ 1,814	\$ 454
Feed and Crop Cost per Cwt.		\$ 7.58	\$ 7.68	\$ 7.57	\$ 7.73	\$ 8.13	\$ 7.14	\$ 7.20	\$ 1.80
Feed and Crop Cost as % of Milk Income		44.1%	40.0%	41.5%	43.0%	41.6%	42.0%	40.0%	10.0%

Notes:

¹ Operating Expense Ratio: (Farm Expense w/o interest & depreciation) / (Gross Farm Income)² Asset Turnover Ratio: Gross farm income / Total Assets³ Working Capital Sufficiency -- Working Capital as % of Farm Income: Working Capital / Gross Farm Income⁴ Total Debt Coverage Ratio: (Net Income + Depreciation + Interest expense) / Debt service⁵ Net Cost of Production: Includes depreciation expense and not principal payments⁶ Breakeven Cost of Production: Includes principal payments and not depreciation expense

Date Prepared: May 11, 2020

Exhibit 2 Milk Production - Top 23 States

Year: **2019**

State	Milk Production					Number of Cows			Licensed Dairies			Average Herd Size		Milk Per Cow	
	Current Ranking	Previous Ranking	In Million of Lbs.	% Change over prior year	% of U.S. Total	In Thousands	State Ranking	% of U.S. Total	Number	State Ranking	% of U.S. Total	Ave. Head	State Ranking	Lbs. Year	State Ranking
California	1	1	40,564	0.4%	18.6%	1,726	1	18.5%	1,255	7	3.7%	1,375	6	23,502	13
Wisconsin	2	2	30,601	0.1%	14.0%	1,267	2	13.6%	7,720	1	22.6%	164	29	24,152	11
Idaho	3	3	15,631	3.2%	7.2%	625	4	6.7%	460	15	1.3%	1,359	7	25,010	4
New York	4	4	15,122	1.6%	6.9%	627	3	6.7%	3,880	3	11.3%	162	31	24,118	12
Texas	5	5	13,850	7.8%	6.3%	565	5	6.1%	380	16	1.1%	1,487	5	24,513	5
Michigan	6	6	11,385	1.9%	5.2%	426	8	4.6%	1,330	6	3.9%	320	17	26,725	1
Pennsylvania	7	7	10,108	-5.2%	4.6%	490	6	5.2%	5,730	2	16.8%	86	46	20,629	31
Minnesota	8	8	9,931	0.6%	4.5%	448	7	4.8%	2,730	4	8.0%	164	30	22,167	20
New Mexico	9	9	8,187	-1.2%	3.7%	326	9	3.5%	140	26	0.4%	2,329	1	25,113	3
Washington	10	10	6,783	0.7%	3.1%	280	10	3.0%	370	17	1.1%	757	9	24,225	9
Ohio	11	11	5,425	-1.9%	2.5%	251	11	2.7%	1,940	5	5.7%	129	37	21,614	23
Iowa	12	12	5,291	0.4%	2.4%	218	12	2.3%	1,015	8	3.0%	215	23	24,271	8
Colorado	13	14	4,807	5.5%	2.2%	186	14	2.0%	120	30	0.4%	1,550	4	25,844	2
Arizona	14	13	4,769	-4.2%	2.2%	197	13	2.1%	90	34	0.3%	2,189	2	24,208	10
Indiana	15	15	4,073	-2.1%	1.9%	178	15	1.9%	865	9	2.5%	206	24	22,882	17
Kansas	16	16	3,819	3.0%	1.7%	163	16	1.7%	270	19	0.8%	604	12	23,429	14
South Dakota	17	17	2,810	3.9%	1.3%	125	18	1.3%	195	23	0.6%	641	10	22,480	19
Vermont	18	18	2,697	0.6%	1.2%	126	17	1.3%	680	11	2.0%	185	28	21,405	28
Oregon	19	19	2,592	2.4%	1.2%	124	19	1.3%	220	20	0.6%	564	15	20,903	30
Florida	20	20	2,346	-1.5%	1.1%	116	20	1.2%	90	35	0.3%	1,289	8	20,224	32
Utah	21	21	2,262	-2.6%	1.0%	98	21	1.0%	160	24	0.5%	613	11	23,082	16
Georgia	22	23	1,771	0.3%	0.8%	82	23	0.9%	140	27	0.4%	586	14	21,598	24
Illinois	23	22	1,748	-6.9%	0.8%	83	22	0.9%	575	12	1.7%	144	34	21,060	29
subtotal			206,572		94.6%	8,727		93.5%	30,355		88.8%				
All U.S.			218,382	1.0%	100.0%	9,336		100.0%	34,187		100.0%	273		23,391	

Date Prepared: May 11, 2020

Exhibit 3
of Operations

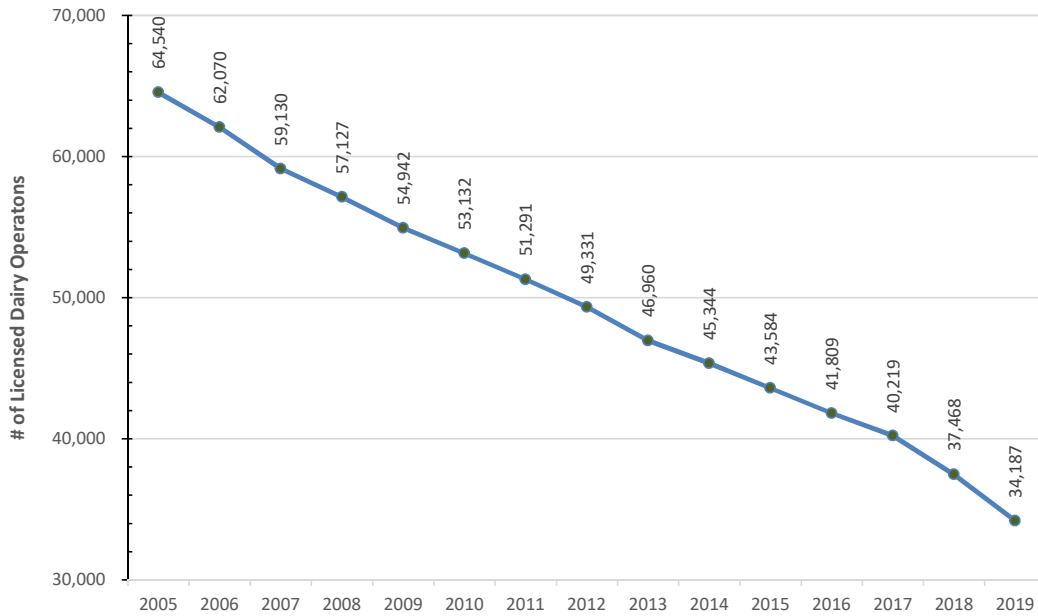
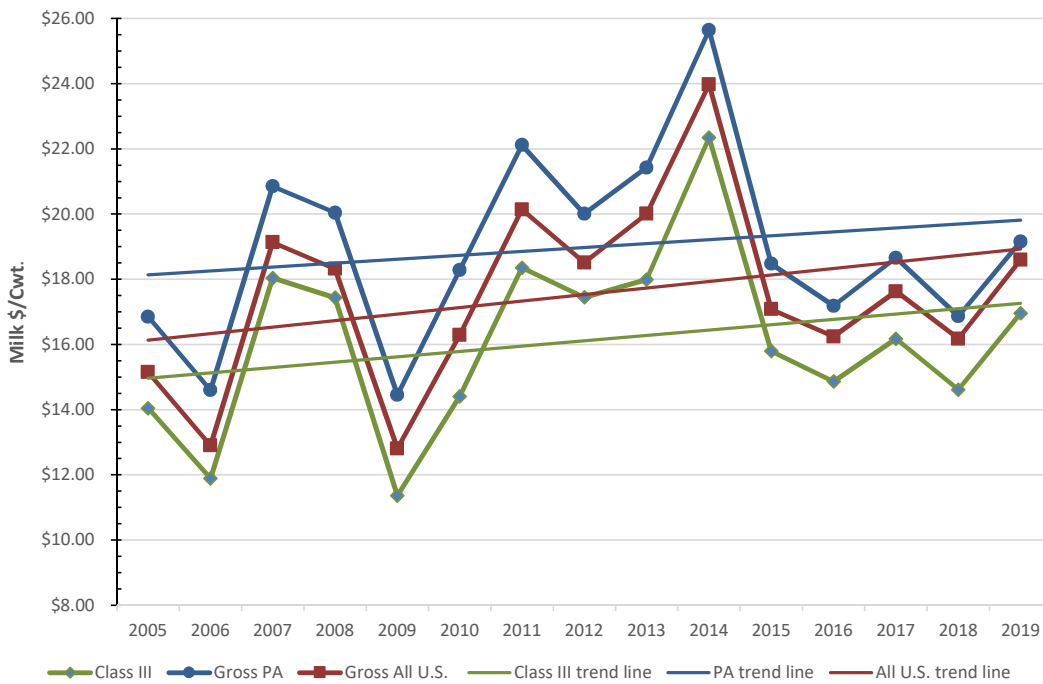


Exhibit 4

Historical Milk Prices



Date Prepared: May 11, 2020

Exhibit 5

Cow Numbers

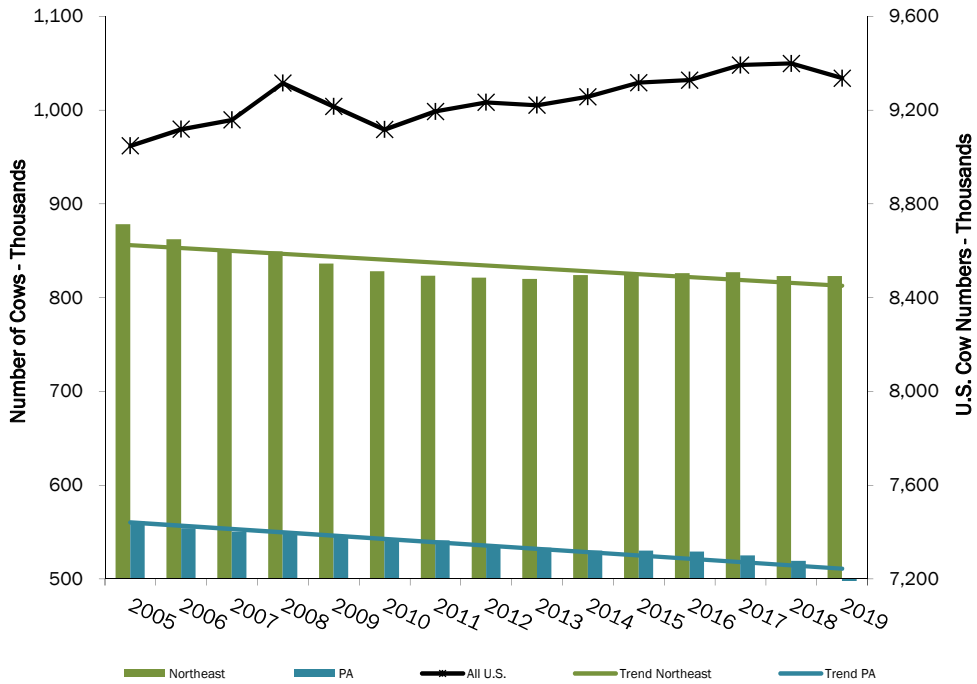


Exhibit 6

Milk Shipped Per Cow

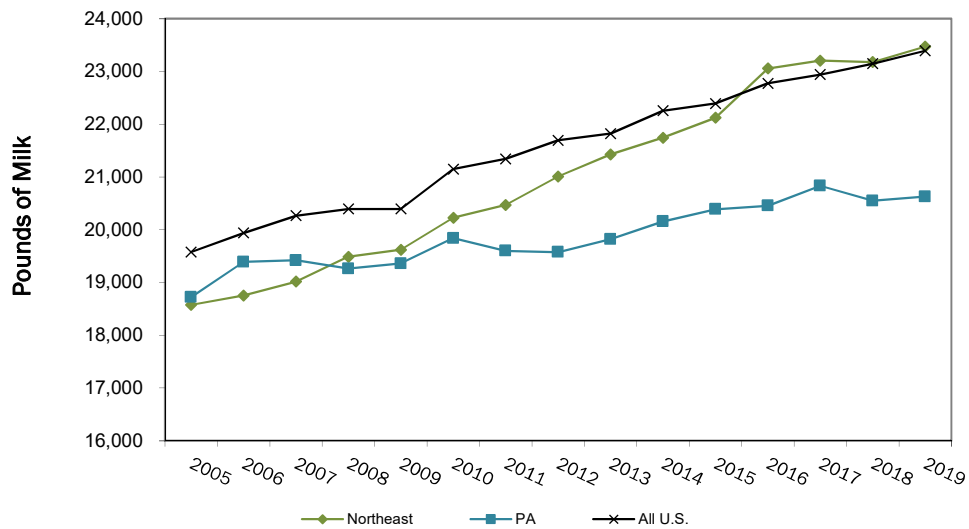


Exhibit 7A

Cost of Production Trends

Date Prepared: May 11, 2020

Source:

**AgChoice F.C. Dairy S.P.R.
Summary Benchmarks**

	\$ per Cwt. -- Accrual Summary for All Farms										3-Year Average	5-Year Average	9-Year Average	
	2010	2011	2012	2013	2014	2015	2016	2017	2018	Est. 2019				
Average Number of Cows		180	172	249	237	240	266	294	265	255		271	264	240
Milk Shipped per Cow		21,390	20,335	23,076	23,129	23,344	23,586	23,998	23,668	23,778		23,815	23,675	22,923
Milk Income		\$ 21.40	\$ 20.18	\$ 21.52	\$ 25.69	\$ 18.84	\$ 17.31	\$ 19.01	\$ 17.31	\$ 19.24		\$ 18.52	\$ 18.34	\$ 20.05
Cost of Goods Sold														
Labor Hired		1.76	2.13	2.42	2.43	2.48	2.46	2.55	2.29	2.27		2.37	2.41	2.31
Feed Purchases		6.93	6.52	7.01	7.81	5.69	5.78	5.91	5.56	5.38		5.62	5.66	6.29
Custom Hire		0.99	0.81	1.08	1.31	1.09	0.98	1.11	1.02	0.99		1.04	1.04	1.04
Crop Expense ¹		1.95	2.14	2.03	2.50	1.60	1.39	1.60	1.46	1.61		1.55	1.53	1.81
Gasoline, Fuel, Oil		0.80	1.01	0.85	0.92	0.57	0.47	0.55	0.63	0.58		0.59	0.56	0.71
Livestock Expense ²		2.13	2.08	2.08	2.42	2.08	1.88	1.84	1.69	1.68		1.74	1.84	1.99
Advertising/Milk Marketing Exp.		1.04	1.11	1.15	1.14	1.22	1.35	1.51	1.70	1.80		1.67	1.52	1.34
Replacement L/S Purchased		0.08	0.09	0.09	0.19	0.21	0.10	0.04	0.05	0.04		0.04	0.09	0.10
Other Expense		0.29	0.35	0.31	0.29	0.27	0.23	0.22	0.22	0.22		0.22	0.23	0.27
Less Non-Milk Income ³		(5.36)	(6.66)	(4.28)	(6.49)	(3.48)	(3.03)	(3.97)	(2.81)	(2.51)		(3.10)	(3.16)	(4.29)
Total Cost of Goods Sold	\$ -	\$ 10.62	\$ 9.58	\$ 12.75	\$ 12.52	\$ 11.73	\$ 11.61	\$ 11.35	\$ 11.80	\$ 12.06		\$ 11.73	\$ 11.71	\$ 11.56
Gross Margin	\$ -	\$ 10.79	\$ 10.60	\$ 8.77	\$ 13.17	\$ 7.10	\$ 5.70	\$ 7.66	\$ 5.51	\$ 7.18		\$ 6.78	\$ 6.63	\$ 8.50
Overhead														
Repairs, Maintenance		1.74	1.66	1.47	1.79	1.35	1.20	1.23	1.14	1.04		1.14	1.19	1.40
Interest Expense		1.04	0.90	0.92	0.83	0.84	0.89	0.98	0.99	1.00		0.99	0.94	0.93
Rent		0.65	0.61	0.68	0.78	0.75	0.70	0.67	0.73	0.74		0.71	0.72	0.70
RE Taxes		0.29	0.30	0.22	0.25	0.24	0.25	0.27	0.29	0.29		0.28	0.27	0.27
Insurance		0.38	0.59	0.40	0.46	0.35	0.33	0.33	0.35	0.34		0.34	0.34	0.39
Utilities		0.51	0.59	0.52	0.58	0.54	0.51	0.50	0.52	0.53		0.51	0.52	0.53
Owner Draw ⁴		1.67	1.69	1.16	1.44	1.52	1.30	1.19	1.24	1.25		1.23	1.30	1.38
Depreciation Expense		1.67	2.03	1.66	2.15	1.77	1.71	1.65	1.67	1.67		1.66	1.69	1.78
Total Overhead	\$ -	\$ 7.96	\$ 8.37	\$ 7.03	\$ 8.27	\$ 7.36	\$ 6.90	\$ 6.82	\$ 6.92	\$ 6.85		\$ 6.86	\$ 6.97	\$ 7.39
Net Cost of Production (COP) ^{5,6}	\$ -	\$ 18.57	\$ 17.95	\$ 19.78	\$ 20.79	\$ 19.09	\$ 18.51	\$ 18.17	\$ 18.72	\$ 18.91		\$ 18.60	\$ 18.68	\$ 18.94
Net Margin or Net Income	\$ -	\$ 2.83	\$ 2.23	\$ 1.74	\$ 4.90	\$ (0.26)	\$ (1.20)	\$ 0.84	\$ (1.41)	\$ 0.33		\$ (0.08)	\$ (0.34)	\$ 1.11
Non-Farm include in Non Milk ⁷		0.26	0.54	0.20	0.41	0.29	0.12	0.21	0.24	0.21		0.22	0.21	0.27
Principal Payments		\$ 1.94	\$ 1.55	\$ 1.50	\$ 2.21	\$ 1.61	\$ 1.42	\$ 1.52	\$ 1.45	\$ 1.53		\$ 1.50	\$ 1.51	\$ 1.64
Breakeven Cost of Production	\$ -	\$ 18.85	\$ 17.48	\$ 19.61	\$ 20.84	\$ 18.93	\$ 18.22	\$ 18.03	\$ 18.50	\$ 18.77		\$ 18.44	\$ 18.49	\$ 18.81
EBITDA ⁸	\$ -	\$ 6.96	\$ 6.31	\$ 5.27	\$ 8.92	\$ 3.59	\$ 2.59	\$ 4.45	\$ 2.25	\$ 4.04		\$ 3.58	\$ 3.38	\$ 4.93

Exhibit 7B

Cost of Production Trends

Date Prepared: May 11, 2020

Source:

**AgChoice F.C. Dairy S.P.R.
Summary Benchmarks**

	\$ per Cow -- Accrual Summary for All Farms										3-Year Average	5-Year Average	9-Year Average
	2010	2011	2012	2013	2014	2015	2016	2017	2018	Est. 2019			
Average Number of Cows		180	172	249	237	240	266	294	265	255	271	264	240
Milk Shipped per Cow		21,390	20,335	23,076	23,129	23,344	23,586	23,998	23,668	23,778	23,815	23,675	22,923
Milk Income		\$ 4,578	\$ 4,104	\$ 4,966	\$ 5,942	\$ 4,397	\$ 4,082	\$ 4,561	\$ 4,096	\$ 4,575	\$ 4,411	\$ 4,342	\$ 4,589
Cost of Goods Sold													
Labor Hired		377	433	558	563	578	581	611	542	540	564	570	531
Feed Purchases		1,483	1,326	1,618	1,807	1,329	1,363	1,418	1,315	1,280	1,338	1,341	1,438
Custom Hire		212	164	249	303	255	231	267	242	235	248	246	240
Crop Expense ¹		418	436	468	578	374	327	383	346	382	370	362	412
Gasoline, Fuel, Oil		172	205	197	212	132	110	133	148	137	139	132	161
Livestock Expense ²		455	422	480	560	486	444	441	401	400	414	434	454
Advertising/Milk Marketing Exp.		222	226	266	264	285	319	362	402	428	397	359	308
Replacement L/S Purchased		18	18	21	43	50	23	9	12	9	10	21	23
Other Expense		61	72	72	68	62	55	52	51	52	52	54	61
Less Non-Milk Income ³		(1,147)	(1,354)	(987)	(1,502)	(812)	(715)	(953)	(666)	(596)	(738)	(748)	(970)
Total Cost of Goods Sold	\$ -	\$ 2,271	\$ 1,948	\$ 2,942	\$ 2,896	\$ 2,739	\$ 2,738	\$ 2,723	\$ 2,793	\$ 2,867	\$ 2,794	\$ 2,772	\$ 2,657
Gross Margin	\$ -	\$ 2,307	\$ 2,156	\$ 2,024	\$ 3,046	\$ 1,658	\$ 1,344	\$ 1,838	\$ 1,303	\$ 1,708	\$ 1,616	\$ 1,570	\$ 1,932
Overhead													
Repairs, Maintenance		372	338	339	413	315	283	295	269	248	271	282	319
Interest Expense		223	184	212	193	197	211	234	234	237	235	223	214
Rent		139	124	158	180	175	166	161	173	175	170	170	161
RE Taxes		63	62	51	57	56	59	65	68	68	67	63	61
Insurance		81	119	93	106	82	78	79	82	82	81	81	89
Utilities		109	120	119	133	125	120	120	122	125	122	122	121
Owner Draw ⁴		358	344	267	333	354	307	286	294	297	292	308	316
Depreciation Expense		357	412	384	497	414	403	397	395	397	396	401	406
Total Overhead	\$ -	\$ 1,702	\$ 1,703	\$ 1,623	\$ 1,912	\$ 1,718	\$ 1,627	\$ 1,637	\$ 1,637	\$ 1,629	\$ 1,634	\$ 1,650	\$ 1,688
Net Cost of Production (COP) ^{5,6}	\$ -	\$ 3,973	\$ 3,651	\$ 4,565	\$ 4,808	\$ 4,457	\$ 4,365	\$ 4,360	\$ 4,430	\$ 4,496	\$ 4,429	\$ 4,422	\$ 4,345
Net Margin or Net Income	\$ -	\$ 605	\$ 453	\$ 401	\$ 1,134	\$ (60)	\$ (283)	\$ 201	\$ (334)	\$ 79	\$ (18)	\$ (79)	\$ 244
Non-Farm include in Non Milk ⁷		55	110	47	94	67	28	50	56	50	52	50	62
Principal Payments		416	316	345	510	377	335	365	344	364	358	357	375
Breakeven Cost of Production	\$ -	\$ 4,032	\$ 3,555	\$ 4,526	\$ 4,821	\$ 4,420	\$ 4,297	\$ 4,328	\$ 4,379	\$ 4,463	\$ 4,390	\$ 4,377	\$ 4,313
EBITDA ⁸	\$ -	\$ 1,488	\$ 1,283	\$ 1,217	\$ 2,063	\$ 838	\$ 610	\$ 1,068	\$ 533	\$ 960	\$ 854	\$ 802	\$ 1,118

Exhibit 7C

Cost of Production Trends

Date Prepared: May 11, 2020

Source:

**AgChoice F.C. Dairy S.P.R.
Summary Benchmarks**

Footnotes -- Accrual Summary of All Farms

Average Number of Cows
Milk Shipped per Cow

Milk Income

Cost of Goods Sold

Labor Hired
Feed Purchases
Custom Hire
Crop Expense ¹
Gasoline, Fuel, Oil
Livestock Expense ²
Advertising/Milk Marketing Exp.
Replacement L/S Purchased
Other Expense
Less Non-Milk Income ³

Total Cost of Goods Sold

Gross Margin

Overhead

Repairs, Maintenance
Interest Expense
Rent
RE Taxes
Insurance
Utilities
Owner Draw ⁴
Depreciation Expense

Total Overhead

Net Cost of Production (COP) ^{5,6}

Net Margin or Net Income

Non-Farm include in Non Milk ⁷

Principal Payments

Breakeven Cost of Production

EBITDA ⁸

Footnotes:

¹ Crop Expense = Chemicals + Fertilizer, Lime + Seed, Plant Purchases

² Livestock Expense = Supply Purchases + Bedding + Production Enhancers + Veterinary, Breeding, etc. + Hoof Care + DHIA

³ Non-Milk Income = Livestock sales + rents + cash crops + Cooperative Distributions + Ag Program Payments + Interest income + Wages + Accrual Adj.

⁴ Owner Draw = Income Taxes/Social Security + Living Expenses/Partner Draws

⁵ Net Cost of Production = Total Cost of Goods Sold + Total Overhead

⁶ Net Cost of Production = Accrual based break even milk price

⁷ Non Farm income amount included in Non-Milk Income -- This is used in calculating EBITDA for comparison to AgChoice trend forms

⁸ EBITDA is calculated by adding Depreciation, Interest, Owner Draws, & Non-Farm income back to Net Margin

Date Prepared: May 11, 2020

Exhibit 7D

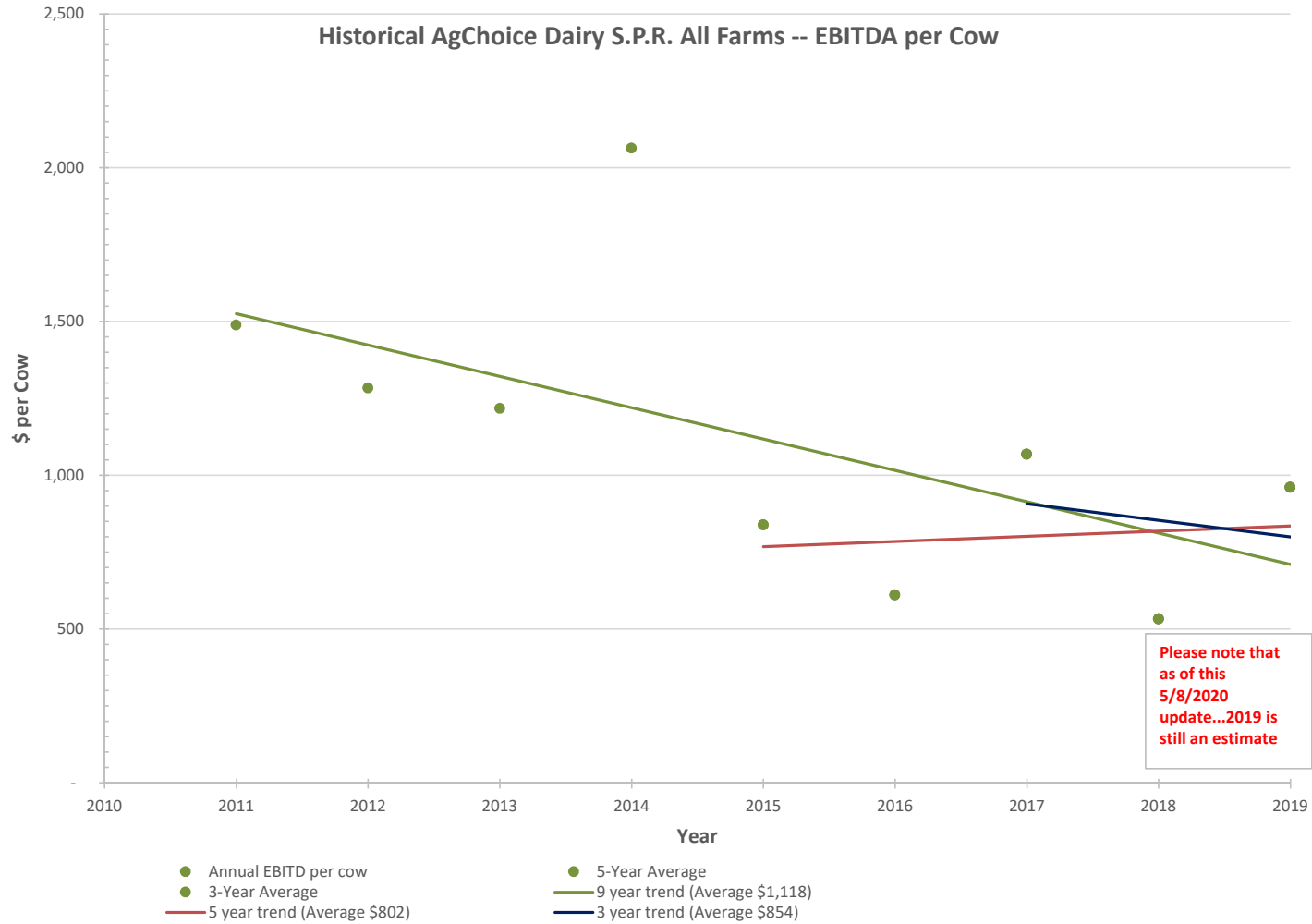


Exhibit 7E Cost of Production Trends

Date Prepared: May 11, 2020

Source: AgChoice F.C. Dairy S.P.R. Summary Benchmarks
Accrual Summary for All Farms

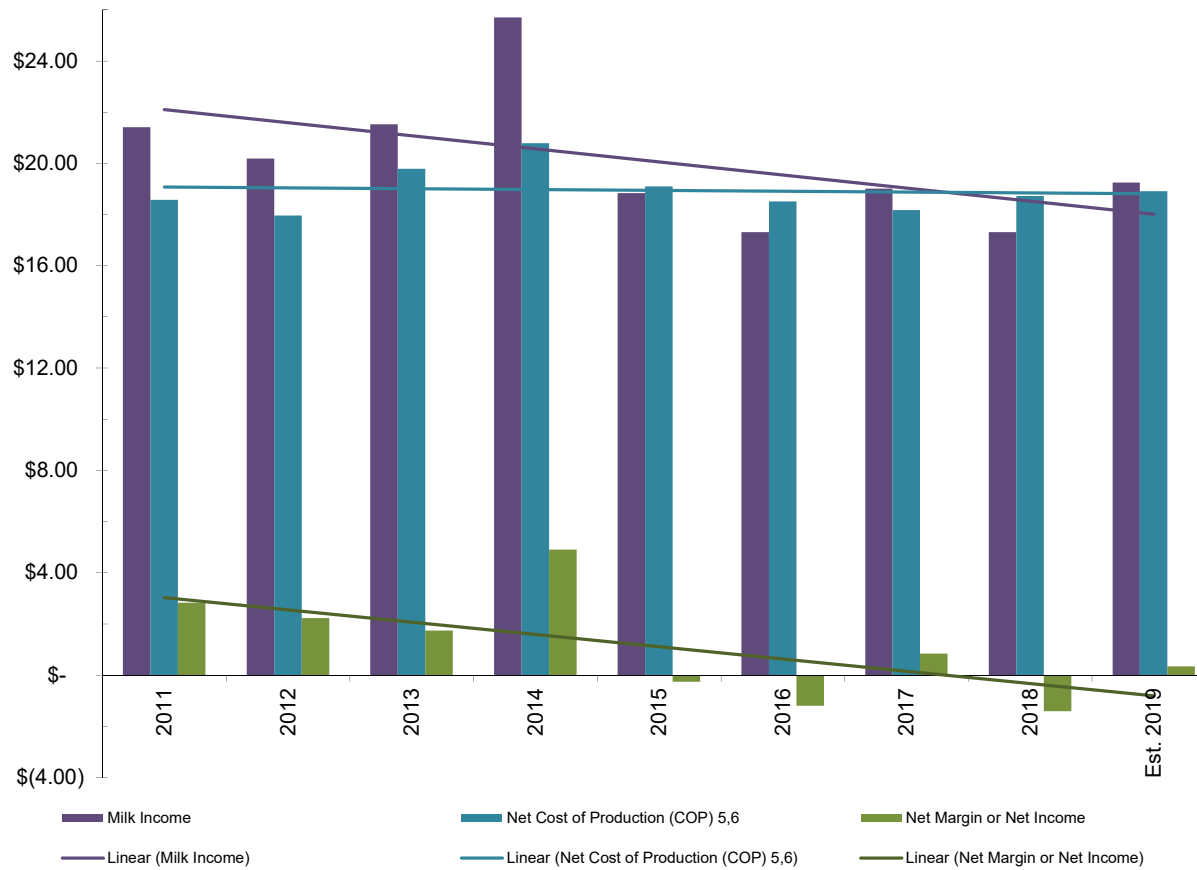


Exhibit 8A

Cost of Production Trends

Date Prepared: May 11, 2020

Source:

**Northeast Dairy Farm
Summary Benchmarks**
\$ per Cwt. -- Accrual Summary for All Farms

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Est. 2019	3-Year Average	5-Year Average	10-Year Average
Average Number of Cows	277	306	326	343	315	339	374	403	470	478	478	475	441	383
Milk Shipped per Cow	22,219	22,809	23,244	23,552	23,848	23,847	24,445	25,239	25,493	25,264	25,241	25,333	25,136	24,298
Milk Income	\$ 13.80	\$ 17.70	\$ 21.53	\$ 19.74	\$ 21.30	\$ 25.52	\$ 18.18	\$ 16.85	\$ 18.34	\$ 17.19	\$ 19.21	\$ 18.25	\$ 17.96	\$ 19.56
Cost of Goods Sold														
Labor Hired	2.88	2.81	2.97	3.07	3.09	3.43	3.26	3.20	3.33	3.19	3.02	3.18	3.20	3.14
Feed Purchases	5.58	5.58	6.79	7.50	7.75	7.85	7.09	6.24	6.24	6.45	6.30	6.33	6.47	6.78
Custom Hire	0.58	0.64	0.64	0.62	0.65	0.65	0.74	0.63	0.63	0.73	0.67	0.68	0.68	0.66
Crop Expense ¹	1.12	1.10	1.28	1.52	1.61	1.68	1.39	1.21	1.21	1.13	1.38	1.24	1.26	1.35
Gasoline, Fuel, Oil	0.68	0.79	1.07	1.07	1.05	1.08	0.68	0.52	0.59	0.69	0.66	0.65	0.63	0.82
Livestock Expense ²	1.62	1.67	1.68	2.03	1.95	2.18	2.01	1.89	1.87	1.64	1.64	1.72	1.81	1.86
Advertising/Milk Marketing Exp.	0.94	0.94	0.87	0.94	0.95	0.94	0.97	0.98	1.05	1.14	1.24	1.14	1.08	1.00
Replacement L/S Purchased	0.05	0.05	0.05	0.05	0.05	0.20	0.02	0.07	0.03	0.01	0.01	0.02	0.03	0.05
Other Expense	0.55	0.53	0.71	0.34	0.23	0.38	0.39	0.38	0.35	0.40	0.28	0.34	0.36	0.40
Less Non-Milk Income ³	(3.37)	(3.02)	(3.21)	(4.19)	(3.58)	(3.87)	(4.33)	(3.58)	(3.22)	(3.14)	(2.92)	(3.09)	(3.44)	(3.51)
Total Cost of Goods Sold	\$ 10.63	\$ 11.10	\$ 12.84	\$ 12.93	\$ 13.76	\$ 14.52	\$ 12.22	\$ 11.55	\$ 12.08	\$ 12.24	\$ 12.28	\$ 12.20	\$ 12.07	\$ 12.55
Gross Margin	\$ 3.17	\$ 6.61	\$ 8.69	\$ 6.80	\$ 7.54	\$ 11.00	\$ 5.96	\$ 5.31	\$ 6.26	\$ 4.95	\$ 6.94	\$ 6.05	\$ 5.89	\$ 7.01
Overhead														
Repairs, Maintenance	1.00	1.09	1.37	1.29	1.39	1.77	1.43	1.23	1.29	1.13	1.06	1.16	1.23	1.30
Interest Expense	0.55	0.58	0.52	0.50	0.49	0.48	0.47	0.52	0.63	0.76	0.81	0.73	0.64	0.58
Rent	0.31	0.33	0.36	0.34	0.39	0.45	0.45	0.39	0.41	0.42	0.52	0.45	0.44	0.41
RE Taxes	0.26	0.25	0.26	0.27	0.30	0.33	0.28	0.28	0.31	0.28	0.22	0.27	0.27	0.28
Insurance	0.26	0.25	0.26	0.25	0.26	0.28	0.29	0.27	0.25	0.24	0.24	0.24	0.26	0.26
Utilities	0.45	0.47	0.46	0.43	0.47	0.51	0.47	0.42	0.36	0.38	0.47	0.41	0.42	0.45
Owner Draw ⁴	0.74	0.67	0.69	0.64	0.75	0.75	0.69	0.58	0.49	0.49	1.09	0.69	0.67	0.68
Depreciation Expense	1.32	1.24	1.14	1.25	1.43	1.51	1.44	1.38	1.30	1.27	1.44	1.34	1.37	1.34
Total Overhead	\$ 4.91	\$ 4.87	\$ 5.07	\$ 4.97	\$ 5.48	\$ 6.07	\$ 5.52	\$ 5.08	\$ 5.03	\$ 4.98	\$ 5.85	\$ 5.29	\$ 5.29	\$ 5.29
Net Cost of Production (COP) ^{5,6}	\$ 15.54	\$ 15.97	\$ 17.91	\$ 17.90	\$ 19.25	\$ 20.59	\$ 17.74	\$ 16.63	\$ 17.11	\$ 17.22	\$ 18.13	\$ 17.49	\$ 17.36	\$ 17.84
Net Margin or Net Income	\$ (1.74)	\$ 1.74	\$ 3.62	\$ 1.84	\$ 2.05	\$ 4.93	\$ 0.44	\$ 0.23	\$ 1.23	\$ (0.03)	\$ 1.09	\$ 0.76	\$ 0.59	\$ 1.71
Non-Farm include in Non Milk ⁷	0.18	0.18	0.18	0.19	0.24	0.18	0.56	0.17	0.09	0.13	0.13	0.12	0.22	0.20
Principal Payments	\$ 1.75	\$ 1.75	\$ 1.79	\$ 1.79	\$ 2.00	\$ 2.02	\$ 1.91	\$ 1.88	\$ 1.76	\$ 1.83	\$ 1.73	\$ 1.77	\$ 1.82	\$ 1.84
Breakeven Cost of Production	\$ 15.96	\$ 16.48	\$ 18.56	\$ 18.44	\$ 19.81	\$ 21.11	\$ 18.21	\$ 17.12	\$ 17.57	\$ 17.78	\$ 18.41	\$ 17.92	\$ 17.82	\$ 18.35
EBITDA ⁸	\$ 0.70	\$ 4.04	\$ 5.79	\$ 4.03	\$ 4.50	\$ 7.49	\$ 2.47	\$ 2.54	\$ 3.56	\$ 2.36	\$ 4.29	\$ 3.41	\$ 3.05	\$ 4.11

Exhibit 8B

Cost of Production Trends

Date Prepared: May 11, 2020

Source:

**Northeast Dairy Farm
Summary Benchmarks**
\$ per Cow -- Accrual Summary for All Farms

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Est. 2019	3-Year Average	5-Year Average	10-Year Average
Average Number of Cows	277	306	326	343	315	339	374	403	470	478	478	475	441	383
Milk Shipped per Cow	22,219	22,809	23,244	23,552	23,848	23,847	24,445	25,239	25,493	25,264	25,241	25,333	25,136	24,298
Milk Income	\$ 3,066	\$ 4,038	\$ 5,004	\$ 4,648	\$ 5,080	\$ 6,086	\$ 4,444	\$ 4,254	\$ 4,676	\$ 4,344	\$ 4,850	\$ 4,623	\$ 4,514	\$ 4,742
Cost of Goods Sold														
Labor Hired	640	640	690	722	737	817	797	808	849	805	762	805	804	763
Feed Purchases	1,239	1,273	1,578	1,767	1,849	1,873	1,733	1,576	1,590	1,630	1,591	1,604	1,624	1,646
Custom Hire	128	146	149	146	155	155	180	159	161	185	170	172	171	161
Crop Expense ¹	249	252	297	357	384	400	339	305	308	286	348	314	317	328
Gasoline, Fuel, Oil	152	180	249	253	251	258	166	132	151	174	167	164	158	198
Livestock Expense ²	360	381	391	477	465	521	492	476	477	415	413	435	455	451
Advertising/Milk Marketing Exp.	208	215	202	221	227	225	237	247	267	288	314	290	271	244
Replacement L/S Purchased	11	11	12	11	13	47	4	17	8	2	2	4	7	13
Other Expense	123	122	164	79	55	90	96	97	88	101	70	86	90	96
Less Non-Milk Income ³	(749)	(689)	(747)	(987)	(854)	(923)	(1,058)	(903)	(820)	(793)	(738)	(784)	(862)	(851)
Total Cost of Goods Sold	\$ 2,361	\$ 2,531	\$ 2,985	\$ 3,046	\$ 3,282	\$ 3,463	\$ 2,986	\$ 2,914	\$ 3,079	\$ 3,093	\$ 3,099	\$ 3,090	\$ 3,034	\$ 3,048
Gross Margin	\$ 705	\$ 1,507	\$ 2,019	\$ 1,602	\$ 1,798	\$ 2,623	\$ 1,458	\$ 1,340	\$ 1,597	\$ 1,251	\$ 1,751	\$ 1,533	\$ 1,479	\$ 1,695
Overhead														
Repairs, Maintenance	223	248	319	304	331	421	350	310	328	285	268	294	308	316
Interest Expense	123	132	122	117	118	114	115	132	160	192	205	186	161	141
Rent	69	76	83	81	93	107	110	99	104	107	131	114	110	99
RE Taxes	58	58	60	63	71	78	69	71	79	71	55	68	69	68
Insurance	58	56	61	59	62	67	72	68	63	61	61	62	65	63
Utilities	101	107	108	102	112	121	115	107	93	97	119	103	106	108
Owner Draw ⁴	165	152	160	150	180	180	168	146	125	123	274	174	167	166
Depreciation Expense	294	282	265	294	341	359	351	349	331	322	363	339	343	326
Total Overhead	\$ 1,091	\$ 1,111	\$ 1,178	\$ 1,170	\$ 1,308	\$ 1,447	\$ 1,350	\$ 1,282	\$ 1,283	\$ 1,258	\$ 1,476	\$ 1,339	\$ 1,330	\$ 1,286
Net Cost of Production (COP) ^{5,6}	\$ 3,452	\$ 3,642	\$ 4,163	\$ 4,216	\$ 4,590	\$ 4,910	\$ 4,336	\$ 4,196	\$ 4,362	\$ 4,351	\$ 4,575	\$ 4,429	\$ 4,364	\$ 4,334
Net Margin or Net Income	\$ (386)	\$ 396	\$ 841	\$ 432	\$ 490	\$ 1,176	\$ 108	\$ 58	\$ 314	\$ (7)	\$ 275	\$ 194	\$ 150	\$ 408
Non-Farm include in Non Milk ⁷	40	41	41	44	57	42	138	43	23	33	33	30	54	50
Principal Payments	388	399	416	421	476	482	466	475	448	463	436	449	458	448
Breakeven Cost of Production	\$ 3,546	\$ 3,759	\$ 4,314	\$ 4,343	\$ 4,725	\$ 5,033	\$ 4,451	\$ 4,322	\$ 4,479	\$ 4,492	\$ 4,648	\$ 4,540	\$ 4,478	\$ 4,457
EBITDA ⁸	\$ 156	\$ 921	\$ 1,347	\$ 949	\$ 1,072	\$ 1,787	\$ 604	\$ 642	\$ 907	\$ 597	\$ 1,084	\$ 863	\$ 767	\$ 991

Exhibit 8C

Cost of Production Trends

Date Prepared: May 11, 2020

Source:

**Northeast Dairy Farm
Summary Benchmarks**

Footnotes -- Accrual Summary of All Farms

Average Number of Cows
Milk Shipped per Cow

Milk Income

Cost of Goods Sold

Labor Hired
Feed Purchases
Custom Hire
Crop Expense ¹
Gasoline, Fuel, Oil
Livestock Expense ²
Advertising/Milk Marketing Exp.
Replacement L/S Purchased
Other Expense
Less Non-Milk Income ³

Total Cost of Goods Sold

Gross Margin

Overhead

Repairs, Maintenance
Interest Expense
Rent
RE Taxes
Insurance
Utilities
Owner Draw ⁴
Depreciation Expense

Total Overhead

Net Cost of Production (COP) ^{5,6}

Net Margin or Net Income

Non-Farm include in Non Milk ⁷

Principal Payments

Breakeven Cost of Production

EBITDA ⁸

Footnotes:

¹ Crop Expense = Chemicals + Fertilizer, Lime + Seed, Plant Purchases

² Livestock Expense = Supply Purchases + Bedding + Production Enhancers + Veterinary, Breeding, etc. + Hoof Care + DHIA

³ Non-Milk Income = Livestock sales + rents + cash crops + Cooperative Distributions + Ag Program Payments + Interest income + Wages

⁴ Owner Draw = Income Taxes/Social Security + Living Expenses/Partner Draws

⁵ Net Cost of Production = Total Cost of Goods Sold + Total Overhead

⁶ Net Cost of Production = Accrual based break even milk price

⁷ Non Farm income amount included in Non-Milk Income -- This is used in calculating EBITDA for comparison to AgChoice trend forms

⁸ EBITDA is calculated by adding Depreciation, Interest, Owner Draws, & Non-Farm income back to Net Margin

Date Prepared: May 11, 2020

Exhibit 8D

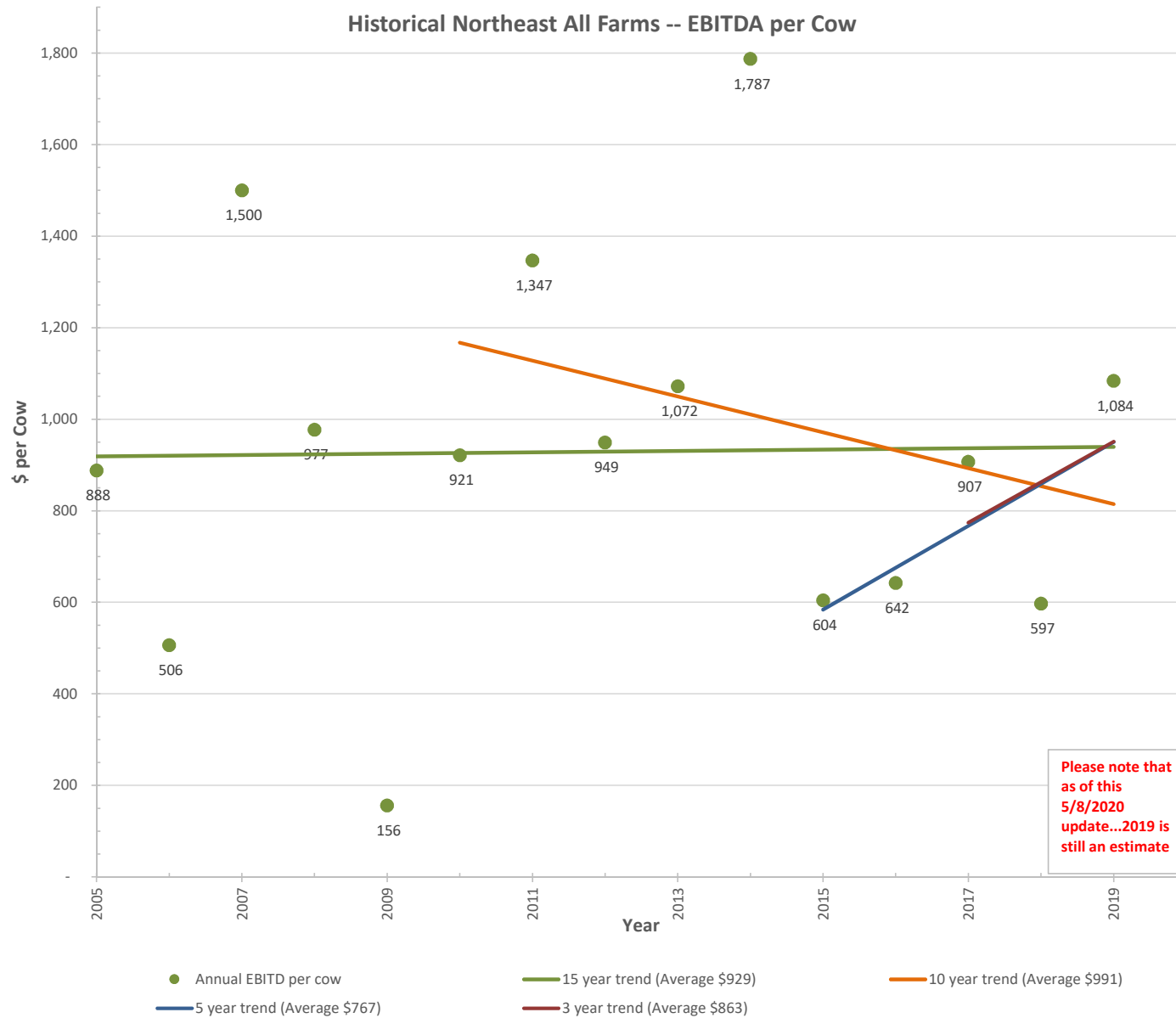


Exhibit 8E Cost of Production Trends

Date Prepared: May 11, 2020

Source: Northeast Dairy Farm Summary Benchmarks
 Accrual Summary for All Farms

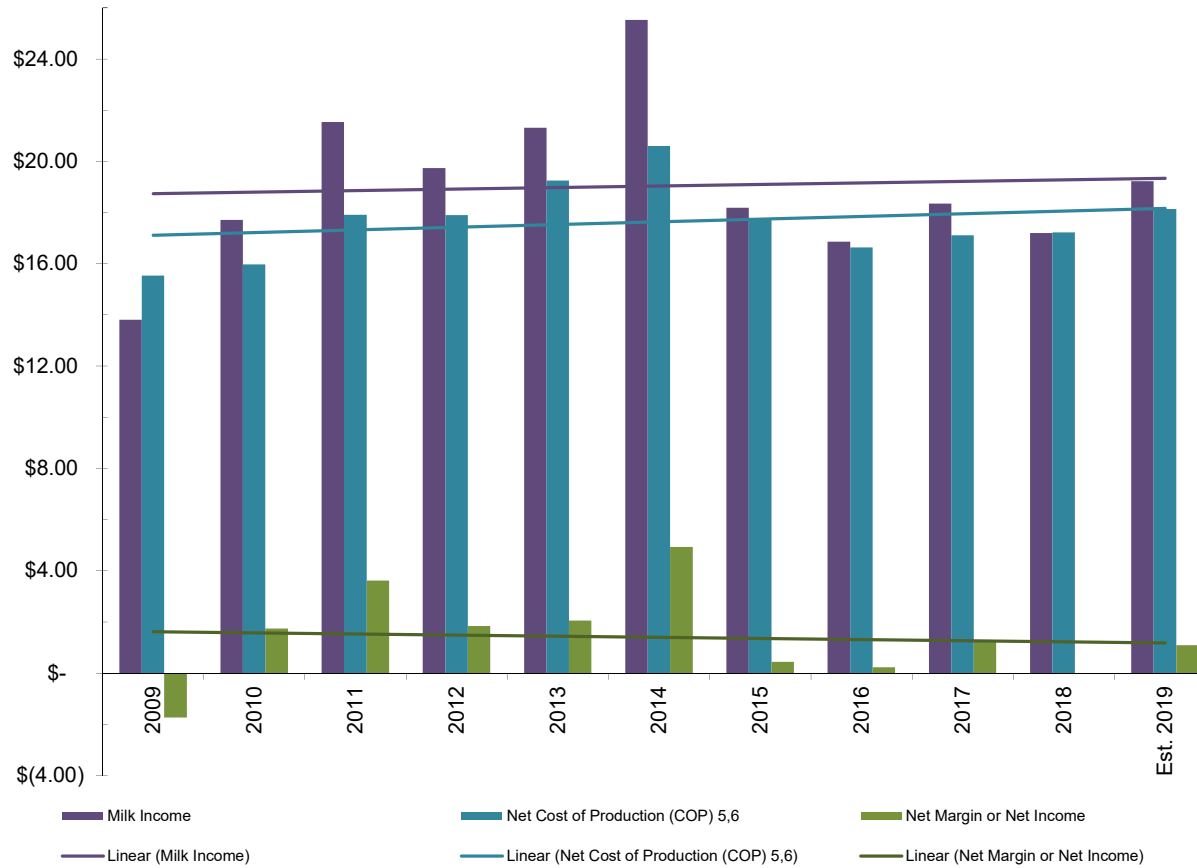
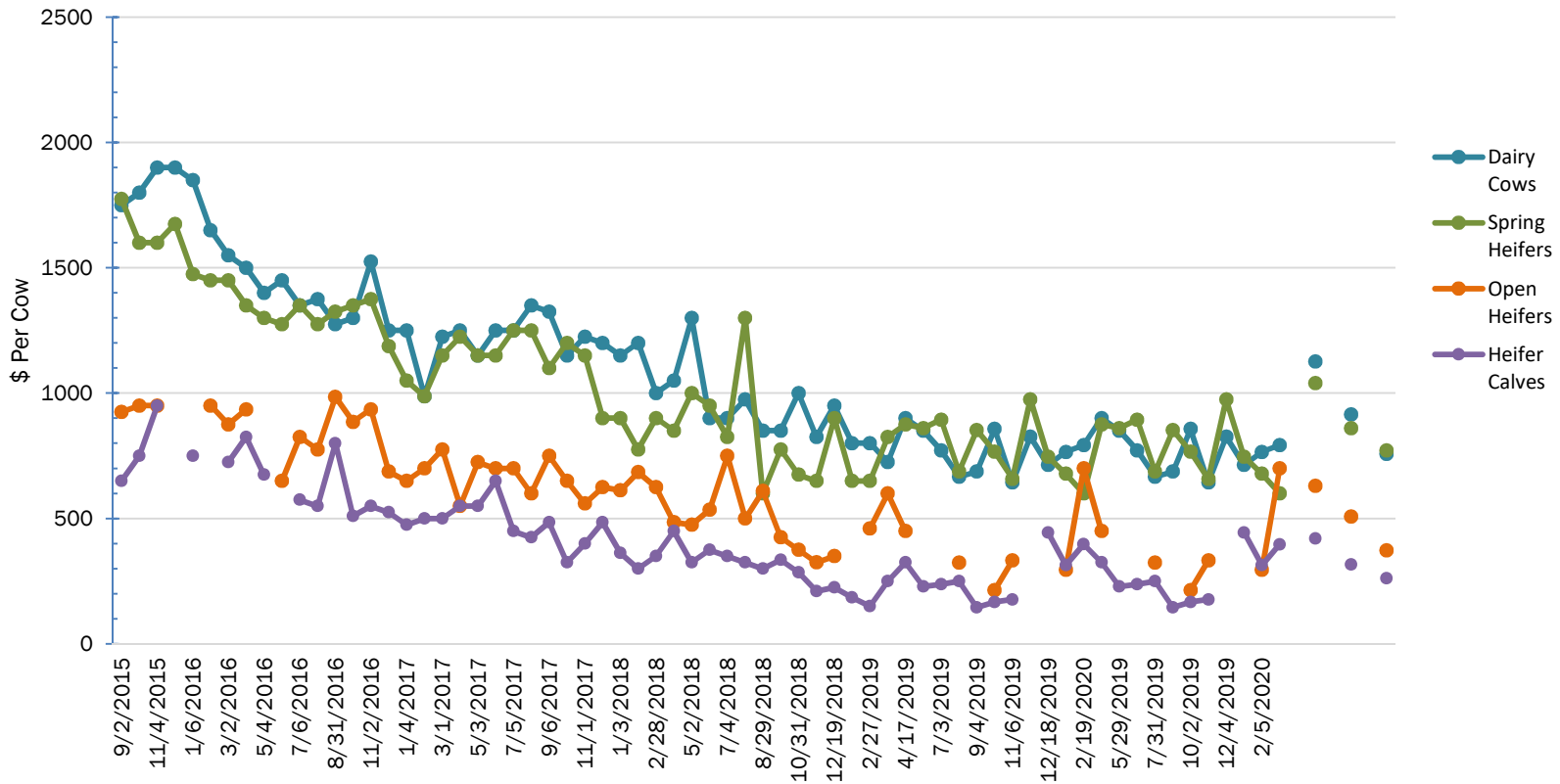


Exhibit 9 Trend of Dairy Livestock Values

Date Prepared: May 11, 2020



Comments:

1) The table above is a summary of data taken from the AgChoice Appraisal Department's livestock summary excel file that summarizes values they review and compile from USDA Department of Ag News New Holland, PA Auction.

2) For association historical and/or projected trends, staff are encouraged to use a base method value to represent cow values.

Exhibit 10 PA Milk Price Information

Date Prepared: May 11, 2020

													Yearly Ranges		
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average	High	Low
2005	\$17.90	\$16.90	\$17.50	\$16.60	\$16.50	\$15.90	\$16.30	\$16.60	\$17.00	\$17.30	\$17.10	\$16.60	\$16.85	\$17.90	\$15.90
2006	\$16.30	\$15.80	\$14.80	\$13.80	\$13.50	\$13.50	\$13.50	\$13.80	\$14.10	\$15.20	\$15.40	\$15.50	\$14.60	\$16.30	\$13.50
2007	\$16.20	\$16.50	\$17.20	\$18.00	\$19.30	\$21.30	\$23.40	\$23.80	\$23.80	\$23.60	\$23.90	\$23.20	\$20.85	\$23.90	\$16.20
2008	\$22.60	\$21.00	\$19.10	\$19.90	\$19.50	\$20.30	\$21.40	\$20.50	\$20.50	\$19.40	\$19.20	\$17.10	\$20.04	\$22.60	\$17.10
2009	\$16.20	\$13.50	\$13.00	\$13.40	\$13.40	\$12.90	\$13.00	\$13.30	\$14.20	\$15.80	\$16.80	\$17.90	\$14.45	\$17.90	\$12.90
2010	\$18.00	\$18.10	\$17.00	\$16.30	\$16.90	\$17.50	\$18.10	\$18.50	\$19.60	\$20.30	\$20.20	\$18.90	\$18.28	\$20.30	\$16.30
2011	\$18.90	\$20.70	\$22.00	\$21.50	\$22.10	\$22.90	\$23.50	\$24.20	\$23.80	\$22.20	\$22.20	\$21.40	\$22.12	\$24.20	\$18.90
2012	\$20.90	\$19.60	\$19.00	\$18.40	\$17.90	\$17.50	\$18.00	\$18.90	\$20.80	\$22.80	\$23.60	\$22.70	\$20.01	\$23.60	\$17.50
2013	\$21.40	\$21.10	\$20.70	\$20.08	\$21.00	\$21.00	\$20.70	\$21.00	\$21.70	\$22.00	\$23.00	\$23.40	\$21.42	\$23.40	\$20.08
2014	\$24.90	\$25.90	\$26.70	\$26.80	\$26.20	\$25.10	\$25.40	\$26.30	\$27.40	\$26.10	\$24.30	\$22.60	\$25.64	\$27.40	\$22.60
2015	\$19.20	\$18.30	\$17.70	\$17.60	\$17.80	\$18.10	\$17.60	\$17.60	\$18.90	\$19.40	\$20.30	\$19.20	\$18.48	\$20.30	\$17.60
2016	\$17.40	\$17.10	\$16.30	\$16.20	\$15.90	\$15.80	\$16.90	\$17.50	\$17.90	\$17.70	\$18.10	\$19.40	\$17.18	\$19.40	\$15.80
2017	\$20.00	\$19.60	\$18.80	\$17.60	\$17.40	\$18.20	\$18.60	\$19.20	\$19.00	\$18.60	\$18.70	\$18.20	\$18.66	\$20.00	\$17.40
2018	\$17.00	\$15.90	\$16.00	\$16.40	\$16.70	\$17.00	\$16.20	\$16.40	\$17.10	\$18.10	\$18.00	\$17.60	\$16.87	\$18.10	\$15.90
2019	\$17.70	\$17.90	\$18.50	\$18.30	\$18.60	\$18.80	\$19.10	\$19.40	\$19.60	\$20.10	\$21.00	\$20.90	\$19.16	\$21.00	\$17.70
<i>Proj. 2020</i>	\$20.20	\$19.40	\$18.90	<i>\$14.57</i>	<i>\$13.05</i>	<i>\$15.18</i>	<i>\$16.45</i>	<i>\$17.27</i>	<i>\$17.72</i>	<i>\$18.00</i>	<i>\$18.20</i>	<i>\$18.22</i>	<i>\$17.26</i>	<i>\$20.20</i>	<i>\$13.05</i>
<i>Proj. 2021</i>	<i>\$18.68</i>	<i>\$18.60</i>	<i>\$18.20</i>	<i>\$17.94</i>	<i>\$17.73</i>	<i>\$17.91</i>	<i>\$18.10</i>	<i>\$17.86</i>	<i>\$18.39</i>	<i>\$18.77</i>	<i>\$18.50</i>	<i>\$19.10</i>	<i>\$18.32</i>	<i>\$19.10</i>	<i>\$17.73</i>
<i>Proj. 2022</i>	<i>\$19.25</i>	<i>\$19.00</i>	<i>\$18.50</i>	<i>\$18.25</i>									<i>\$18.75</i>	<i>\$19.25</i>	<i>\$18.25</i>
3-Year Average*															
3-Yr. Ave.	\$18.23	\$17.80	\$17.77	\$17.43	\$17.57	\$18.00	\$17.97	\$18.33	\$18.57	\$18.93	\$19.23	\$18.90	\$18.23	\$19.23	\$17.43
Olympic Ave.	\$17.70	\$17.90	\$18.50	\$17.60	\$17.40	\$18.20	\$18.60	\$19.20	\$19.00	\$18.60	\$18.70	\$18.20	\$18.30	\$19.20	\$17.40
5-Year Average*															
5-Yr. Ave	\$18.26	\$17.76	\$17.46	\$17.22	\$17.28	\$17.58	\$17.68	\$18.02	\$18.50	\$18.78	\$19.22	\$19.06	\$18.07	\$19.22	\$17.22
Olympic Ave.	\$18.10	\$17.77	\$17.50	\$17.20	\$17.30	\$17.77	\$17.70	\$18.10	\$18.60	\$18.70	\$19.03	\$18.93	\$18.06	\$19.03	\$17.20
10-Year Average*															
10-Yr. Ave	\$19.54	\$19.42	\$19.27	\$18.92	\$19.05	\$19.19	\$19.41	\$19.90	\$20.58	\$20.73	\$20.94	\$20.43	\$19.78	\$20.94	\$18.92
Olympic Ave.	\$19.19	\$19.05	\$18.75	\$18.27	\$18.55	\$18.88	\$19.06	\$19.54	\$20.16	\$20.44	\$20.89	\$20.41	\$19.43	\$20.89	\$18.27

* Projected years are not included in these numbers.

Note:

PA milk prices after the date of outlook are *Futures Prices*. The *Future Prices* are also shown in *color & italicized*. Average years do not include projected years.

Olympic averages eliminate the high and low observations and then average all remaining observations.

Table 11A
Class III Milk Price Information

Date Prepared: May 11, 2020

													Yearly Ranges		
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average	High	Low
2005	\$14.14	\$14.70	\$14.08	\$14.61	\$13.77	\$13.92	\$14.35	\$13.60	\$14.30	\$14.35	\$13.35	\$13.37	\$14.05	\$14.70	\$13.35
2006	\$13.39	\$12.20	\$11.11	\$10.93	\$10.83	\$11.29	\$10.92	\$11.06	\$12.29	\$12.32	\$12.84	\$13.47	\$11.89	\$13.47	\$10.83
2007	\$13.56	\$14.18	\$15.09	\$16.09	\$17.60	\$20.17	\$21.38	\$19.83	\$20.07	\$18.70	\$19.22	\$20.60	\$18.04	\$21.38	\$13.56
2008	\$19.32	\$17.03	\$18.00	\$16.76	\$18.18	\$20.25	\$18.24	\$17.32	\$16.28	\$17.06	\$15.51	\$15.28	\$17.44	\$20.25	\$15.28
2009	\$10.78	\$9.31	\$10.44	\$10.78	\$9.84	\$9.97	\$9.97	\$11.20	\$12.11	\$12.82	\$14.08	\$14.98	\$11.36	\$14.98	\$9.31
2010	\$14.50	\$14.28	\$12.78	\$12.92	\$13.38	\$13.62	\$13.74	\$15.18	\$16.26	\$16.94	\$15.44	\$13.83	\$14.41	\$16.94	\$12.78
2011	\$13.48	\$17.00	\$19.40	\$16.87	\$16.52	\$19.11	\$21.39	\$21.55	\$19.07	\$18.03	\$19.07	\$18.77	\$18.36	\$21.55	\$13.48
2012	\$17.05	\$16.06	\$15.72	\$15.72	\$15.23	\$15.63	\$16.68	\$17.73	\$19.00	\$21.02	\$20.83	\$18.66	\$17.44	\$21.02	\$15.23
2013	\$18.14	\$17.25	\$16.93	\$17.59	\$18.52	\$18.02	\$17.38	\$17.91	\$18.14	\$18.22	\$18.83	\$18.95	\$17.99	\$18.95	\$16.93
2014	\$21.15	\$23.35	\$23.33	\$24.31	\$22.57	\$21.36	\$21.60	\$22.25	\$24.60	\$23.82	\$21.94	\$17.82	\$22.34	\$24.60	\$17.82
2015	\$16.18	\$15.46	\$15.56	\$15.81	\$16.19	\$16.72	\$16.33	\$16.27	\$15.82	\$15.46	\$15.30	\$14.44	\$15.80	\$16.72	\$14.44
2016	\$13.72	\$13.80	\$13.74	\$13.63	\$12.76	\$13.22	\$15.24	\$16.91	\$16.36	\$14.82	\$16.76	\$17.40	\$14.86	\$17.40	\$12.76
2017	\$16.77	\$16.88	\$15.81	\$15.22	\$15.57	\$16.44	\$15.45	\$16.57	\$16.36	\$16.69	\$16.88	\$15.44	\$16.17	\$16.88	\$15.22
2018	\$14.00	\$13.40	\$14.22	\$14.47	\$15.18	\$15.21	\$14.10	\$14.95	\$16.09	\$15.53	\$14.44	\$13.78	\$14.61	\$16.09	\$13.40
2019	\$13.96	\$13.89	\$15.04	\$15.96	\$16.38	\$16.27	\$17.55	\$17.60	\$18.31	\$18.72	\$20.45	\$19.37	\$16.96	\$20.45	\$13.89
<i>Proj. 2020</i>	\$17.05	\$17.00	\$16.25	\$13.07	<i>\$11.55</i>	<i>\$13.68</i>	<i>\$14.70</i>	<i>\$15.27</i>	<i>\$15.72</i>	<i>\$16.00</i>	<i>\$15.95</i>	<i>\$15.72</i>	<i>\$15.16</i>	<i>\$17.05</i>	<i>\$11.55</i>
<i>Proj. 2021</i>	<i>\$15.43</i>	<i>\$15.60</i>	<i>\$15.70</i>	<i>\$15.69</i>	<i>\$15.73</i>	<i>\$15.91</i>	<i>\$16.10</i>	<i>\$16.36</i>	<i>\$16.39</i>	<i>\$16.27</i>	<i>\$16.00</i>	<i>\$16.10</i>	<i>\$15.94</i>	<i>\$16.39</i>	<i>\$15.43</i>
<i>Proj. 2022</i>	<i>\$16.00</i>	<i>\$16.00</i>	<i>\$16.00</i>	<i>\$16.00</i>									<i>\$16.00</i>	<i>\$16.00</i>	<i>\$16.00</i>
3-Year Average*															
3 Yr. Ave.	\$14.91	\$14.72	\$15.02	\$15.22	\$15.71	\$15.97	\$15.70	\$16.37	\$16.92	\$16.98	\$17.26	\$16.20	\$15.92	\$17.26	\$14.72
Olympic Ave.	\$14.00	\$13.89	\$15.04	\$15.22	\$15.57	\$16.27	\$15.45	\$16.57	\$16.36	\$16.69	\$16.88	\$15.44	\$15.62	\$16.88	\$13.89
5-Year Average*															
5 Yr. Ave	\$14.93	\$14.69	\$14.87	\$15.02	\$15.22	\$15.57	\$15.73	\$16.46	\$16.59	\$16.24	\$16.77	\$16.09	\$15.68	\$16.77	\$14.69
Olympic Ave.	\$14.71	\$14.38	\$14.94	\$15.17	\$15.65	\$15.97	\$15.67	\$16.58	\$16.27	\$15.89	\$16.31	\$15.76	\$15.61	\$16.58	\$14.38
10-Year Average*															
10 Yr. Ave	\$15.90	\$16.14	\$16.25	\$16.25	\$16.23	\$16.56	\$16.95	\$17.69	\$18.00	\$17.93	\$17.99	\$16.85	\$16.89	\$18.00	\$15.90
Olympic Ave.	\$15.54	\$15.58	\$15.80	\$15.66	\$15.87	\$16.38	\$16.77	\$17.47	\$17.45	\$17.58	\$17.95	\$16.91	\$16.58	\$17.95	\$15.54

* Projected years are not included in these numbers.

Note:

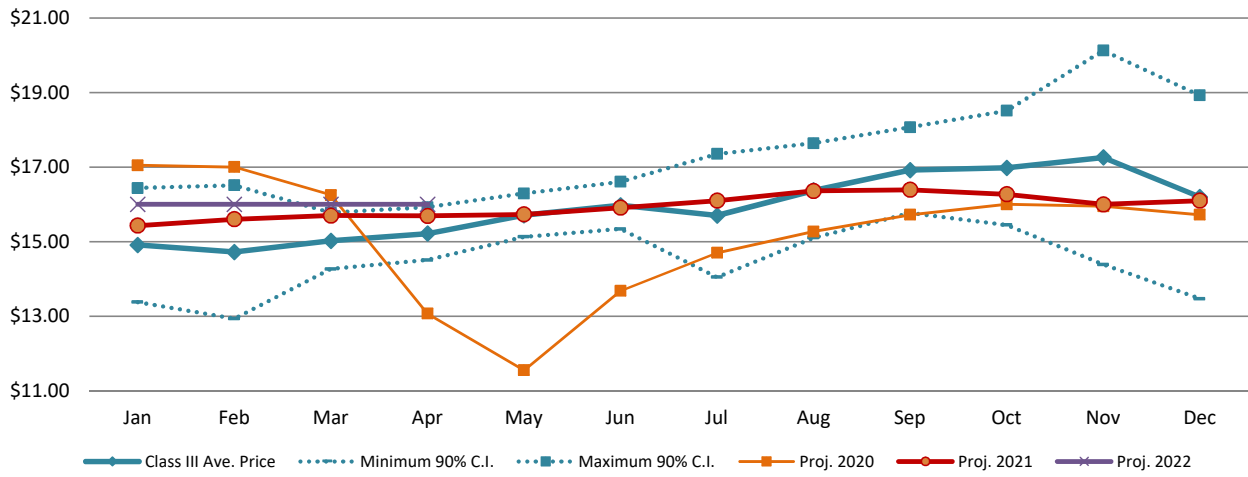
Class III prices after the date of outlook are *Futures Prices*. The *Future Prices* are also shown in *color & italicized*. Average years do not include projected years.

Olympic averages eliminate the high and low observations and then average all remaining observations.

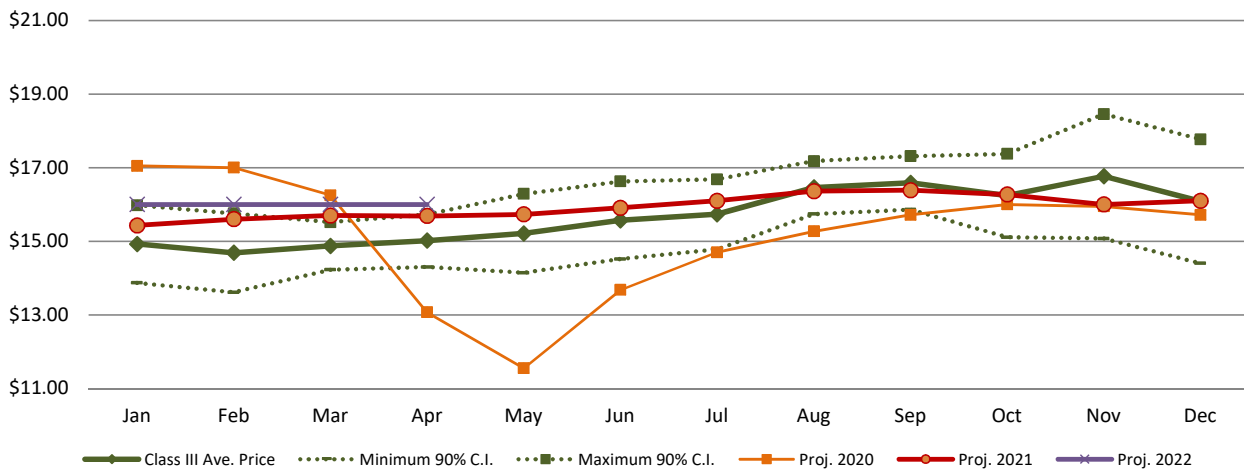
Exhibit 11B
Class III Milk Price Information

Date Prepared: May 11, 2020

Class III Prices – 3-Year Average



Class III Prices – 5-Year Average



Class III Prices – 10-Year Average

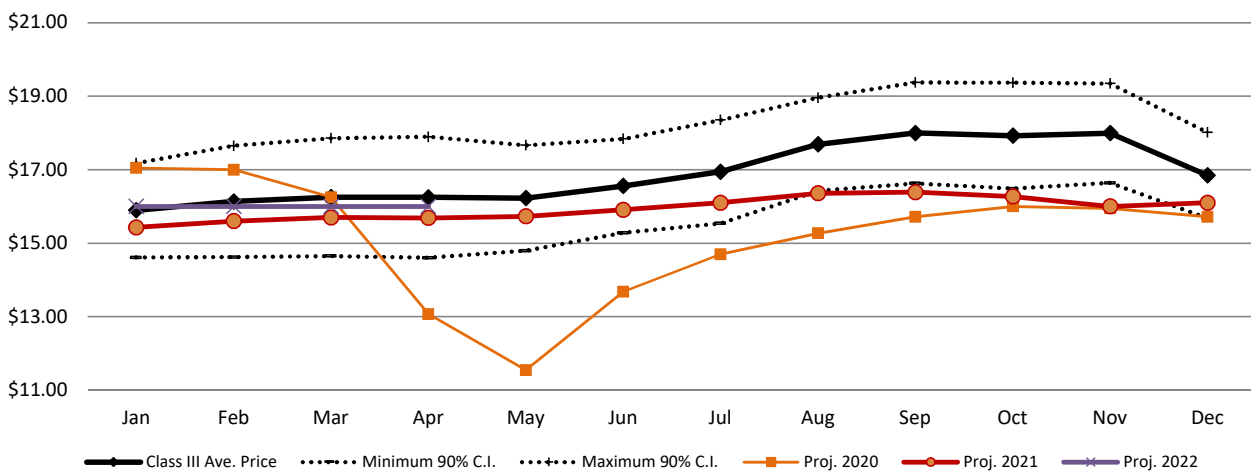


Exhibit 12 PA Basis for Class III

Date Prepared: May 11, 2020

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly Ranges		
													Average	High	Low
2005	\$3.76	\$2.20	\$3.42	\$1.99	\$2.73	\$1.98	\$1.95	\$3.00	\$2.70	\$2.95	\$3.75	\$3.23	\$2.81	\$3.76	\$1.95
2006	\$2.91	\$3.60	\$3.69	\$2.87	\$2.67	\$2.21	\$2.58	\$2.74	\$1.81	\$2.88	\$2.56	\$2.03	\$2.71	\$3.69	\$1.81
2007	\$2.64	\$3.32	\$2.11	\$1.91	\$1.70	\$1.13	\$2.02	\$3.97	\$3.73	\$4.90	\$4.68	\$2.60	\$2.81	\$4.90	\$1.13
2008	\$3.28	\$3.97	\$1.10	\$3.14	\$1.32	\$0.05	\$3.16	\$3.18	\$4.22	\$2.34	\$3.69	\$1.82	\$2.61	\$4.22	\$0.05
2009	\$5.42	\$4.19	\$2.56	\$2.62	\$3.56	\$2.93	\$3.03	\$2.10	\$2.09	\$2.98	\$2.72	\$2.92	\$3.09	\$5.42	\$2.09
2010	\$3.50	\$3.82	\$4.22	\$3.38	\$3.52	\$3.88	\$4.36	\$3.32	\$3.34	\$3.36	\$4.76	\$5.07	\$3.88	\$5.07	\$3.32
2011	\$5.42	\$3.70	\$2.60	\$4.63	\$5.58	\$3.79	\$2.11	\$2.65	\$4.73	\$4.17	\$3.13	\$2.63	\$3.76	\$5.58	\$2.11
2012	\$3.85	\$3.54	\$3.28	\$2.68	\$2.67	\$1.87	\$1.32	\$1.17	\$1.80	\$1.78	\$2.77	\$4.04	\$2.56	\$4.04	\$1.17
2013	\$3.26	\$3.85	\$3.77	\$2.49	\$2.48	\$2.98	\$3.32	\$3.09	\$3.56	\$3.78	\$4.17	\$4.45	\$3.43	\$4.45	\$2.48
2014	\$3.75	\$2.55	\$3.37	\$2.49	\$3.63	\$3.74	\$3.80	\$4.05	\$2.80	\$2.28	\$2.36	\$4.78	\$3.30	\$4.78	\$2.28
2015	\$3.02	\$2.84	\$2.14	\$1.79	\$1.61	\$1.38	\$1.27	\$1.33	\$3.08	\$3.94	\$5.00	\$4.76	\$2.68	\$5.00	\$1.27
2016	\$3.68	\$3.30	\$2.56	\$2.57	\$3.14	\$2.58	\$1.66	\$0.59	\$1.54	\$2.88	\$1.34	\$2.00	\$2.32	\$3.68	\$0.59
2017	\$3.23	\$2.72	\$2.99	\$2.38	\$1.83	\$1.76	\$3.15	\$2.63	\$2.64	\$1.91	\$1.82	\$2.76	\$2.49	\$3.23	\$1.76
2018	\$3.00	\$2.50	\$1.78	\$1.93	\$1.52	\$1.79	\$2.10	\$1.45	\$1.01	\$2.57	\$3.56	\$3.82	\$2.25	\$3.82	\$1.01
2019	\$3.74	\$4.01	\$3.46	\$2.34	\$2.22	\$2.53	\$1.55	\$1.80	\$1.29	\$1.38	\$0.55	\$1.53	\$2.20	\$4.01	\$0.55
<i>Proj. 2020</i>	<i>\$3.15</i>	<i>\$2.40</i>	<i>\$1.75</i>	<i>\$1.50</i>	<i>\$1.50</i>	<i>\$1.50</i>	<i>\$1.75</i>	<i>\$2.00</i>	<i>\$2.00</i>	<i>\$2.00</i>	<i>\$2.25</i>	<i>\$2.50</i>	<i>\$2.03</i>	<i>\$3.15</i>	<i>\$1.50</i>
<i>Proj. 2021</i>	<i>\$3.25</i>	<i>\$3.00</i>	<i>\$2.50</i>	<i>\$2.25</i>	<i>\$2.00</i>	<i>\$2.00</i>	<i>\$2.00</i>	<i>\$1.50</i>	<i>\$2.00</i>	<i>\$2.50</i>	<i>\$2.50</i>	<i>\$3.00</i>	<i>\$2.38</i>	<i>\$3.25</i>	<i>\$1.50</i>
<i>Proj. 2022</i>	<i>\$3.25</i>	<i>\$3.00</i>	<i>\$2.50</i>	<i>\$2.25</i>	<i>\$2.00</i>	<i>\$2.00</i>	<i>\$2.00</i>	<i>\$1.50</i>	<i>\$2.00</i>	<i>\$2.50</i>	<i>\$2.50</i>	<i>\$3.00</i>	<i>\$2.38</i>	<i>\$3.25</i>	<i>\$1.50</i>
3-Year Average*															
3-Yr. Ave.	\$3.32	\$3.08	\$2.74	\$2.22	\$1.86	\$2.03	\$2.27	\$1.96	\$1.65	\$1.95	\$1.98	\$2.70	\$2.31	\$3.32	\$1.65
Olympic Ave.	\$3.23	\$2.72	\$2.99	\$2.34	\$1.83	\$1.79	\$2.10	\$1.80	\$1.29	\$1.91	\$1.82	\$2.76	\$2.22	\$3.23	\$1.29
5-Year Average*															
5-Yr. Ave	\$3.33	\$3.07	\$2.59	\$2.20	\$2.06	\$2.01	\$1.95	\$1.56	\$1.91	\$2.54	\$2.45	\$2.97	\$2.39	\$3.33	\$1.56
Olympic Ave.	\$3.31	\$2.95	\$2.56	\$2.22	\$1.89	\$2.03	\$1.77	\$1.53	\$1.82	\$2.45	\$2.24	\$2.86	\$2.30	\$3.31	\$1.53
10-Year Average*															
10-Yr. Ave	\$3.65	\$3.28	\$3.02	\$2.67	\$2.82	\$2.63	\$2.46	\$2.21	\$2.58	\$2.81	\$2.95	\$3.58	\$2.89	\$3.65	\$2.21
Olympic Ave.	\$3.50	\$3.29	\$3.02	\$2.53	\$2.64	\$2.63	\$2.38	\$2.18	\$2.51	\$2.81	\$2.99	\$3.66	\$2.84	\$3.66	\$2.18

* Projected years are not included in these numbers.

Note:

Class III basis after the date of outlook are *Futures Prices*. The *Future Prices* are also shown in *color & italicized*. Average years do not include projected years.

Olympic averages eliminate the high and low observations and then average all remaining observations.

Exhibit 13A Class IV Milk Price Information

Date Prepared: May 11, 2020

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly Ranges		
													Average	High	Low
2005	\$12.52	\$12.74	\$12.66	\$12.61	\$12.20	\$12.33	\$13.17	\$13.44	\$13.75	\$13.61	\$12.90	\$12.57	\$12.88	\$13.75	\$12.20
2006	\$12.20	\$11.10	\$10.68	\$10.36	\$10.33	\$10.22	\$10.21	\$10.64	\$11.10	\$11.51	\$12.11	\$12.30	\$11.06	\$12.30	\$10.21
2007	\$12.53	\$12.71	\$13.71	\$16.12	\$18.48	\$20.76	\$21.64	\$21.87	\$21.61	\$21.31	\$20.40	\$19.18	\$18.36	\$21.87	\$12.53
2008	\$16.29	\$14.67	\$14.17	\$14.56	\$15.26	\$15.92	\$16.60	\$16.64	\$15.45	\$13.62	\$12.25	\$10.35	\$14.65	\$16.64	\$10.35
2009	\$9.59	\$9.45	\$9.64	\$9.82	\$10.14	\$10.22	\$10.15	\$10.38	\$11.15	\$11.86	\$13.25	\$15.01	\$10.89	\$15.01	\$9.45
2010	\$13.85	\$12.90	\$12.92	\$13.73	\$15.29	\$15.45	\$15.75	\$15.18	\$16.76	\$17.15	\$16.68	\$15.03	\$15.06	\$17.15	\$12.90
2011	\$16.42	\$18.40	\$19.41	\$19.78	\$20.29	\$21.05	\$20.33	\$20.14	\$19.53	\$18.41	\$17.87	\$16.87	\$19.04	\$21.05	\$16.42
2012	\$16.56	\$15.92	\$15.35	\$14.80	\$13.55	\$13.24	\$14.45	\$15.76	\$17.41	\$18.54	\$18.66	\$17.83	\$16.01	\$18.66	\$13.24
2013	\$17.63	\$17.75	\$17.75	\$18.10	\$18.89	\$18.88	\$18.90	\$19.07	\$19.43	\$20.17	\$20.52	\$21.54	\$19.05	\$21.54	\$17.63
2014	\$22.29	\$23.46	\$23.66	\$23.34	\$22.65	\$23.13	\$23.78	\$23.89	\$22.58	\$21.35	\$18.21	\$16.70	\$22.09	\$23.89	\$16.70
2015	\$13.23	\$13.82	\$13.80	\$13.51	\$13.91	\$13.90	\$13.15	\$12.90	\$15.08	\$16.43	\$16.89	\$15.52	\$14.35	\$16.89	\$12.90
2016	\$13.31	\$13.49	\$12.74	\$12.68	\$13.09	\$13.77	\$14.84	\$14.65	\$14.25	\$13.66	\$13.76	\$14.97	\$13.77	\$14.97	\$12.68
2017	\$16.19	\$15.59	\$14.32	\$14.01	\$14.49	\$15.89	\$16.60	\$16.61	\$15.86	\$14.85	\$13.99	\$13.51	\$15.16	\$16.61	\$13.51
2018	\$13.13	\$12.87	\$13.04	\$13.48	\$14.57	\$14.91	\$14.14	\$14.63	\$14.81	\$15.01	\$15.06	\$15.09	\$14.23	\$15.09	\$12.87
2019	\$15.48	\$15.86	\$15.71	\$15.72	\$16.29	\$16.83	\$16.90	\$16.74	\$16.35	\$16.39	\$16.60	\$16.70	\$16.30	\$16.90	\$15.48
<i>Proj. 2020</i>	\$16.65	\$16.20	\$14.87	\$11.40	<i>\$10.22</i>	<i>\$11.30</i>	<i>\$12.10</i>	<i>\$12.68</i>	<i>\$13.00</i>	<i>\$13.03</i>	<i>\$13.21</i>	<i>\$13.61</i>	<i>\$13.19</i>	<i>\$16.65</i>	<i>\$10.22</i>
<i>Proj. 2021</i>	<i>\$13.78</i>	<i>\$14.17</i>	<i>\$14.37</i>	<i>\$14.65</i>	<i>\$14.99</i>	<i>\$15.00</i>	<i>\$15.80</i>	<i>\$15.80</i>	<i>\$15.80</i>	<i>\$16.93</i>	<i>\$16.85</i>	<i>\$16.85</i>	<i>\$15.42</i>	<i>\$16.93</i>	<i>\$13.78</i>
<i>Proj. 2022</i>	<i>\$19.45</i>	<i>\$19.45</i>	<i>\$19.45</i>	<i>\$19.45</i>									<i>\$19.45</i>	<i>\$19.45</i>	<i>\$19.45</i>
3-Year Average*															
3 Yr. Ave.	\$14.93	\$14.77	\$14.36	\$14.40	\$15.12	\$15.88	\$15.88	\$15.99	\$15.67	\$15.42	\$15.22	\$15.10	\$15.23	\$15.99	\$14.36
Olympic Ave.	\$15.48	\$15.59	\$14.32	\$14.01	\$14.57	\$15.89	\$16.60	\$16.61	\$15.86	\$15.01	\$15.06	\$15.09	\$15.34	\$16.61	\$14.01
5-Year Average*															
5 Yr. Ave	\$14.27	\$14.33	\$13.92	\$13.88	\$14.47	\$15.06	\$15.13	\$15.11	\$15.27	\$15.27	\$15.26	\$15.16	\$14.76	\$15.27	\$13.88
Olympic Ave.	\$14.01	\$14.30	\$13.72	\$13.67	\$14.32	\$14.90	\$15.19	\$15.30	\$15.25	\$15.42	\$15.22	\$15.19	\$14.71	\$15.42	\$13.67
10-Year Average*															
10 Yr. Ave	\$15.81	\$16.01	\$15.87	\$15.92	\$16.30	\$16.71	\$16.88	\$16.96	\$17.21	\$17.20	\$16.82	\$16.38	\$16.50	\$17.21	\$15.81
Olympic Ave.	\$15.33	\$15.47	\$15.29	\$15.39	\$15.91	\$16.34	\$16.49	\$16.60	\$16.90	\$17.12	\$16.75	\$16.09	\$16.14	\$17.12	\$15.29

* Projected years are not included in these numbers.

Note:

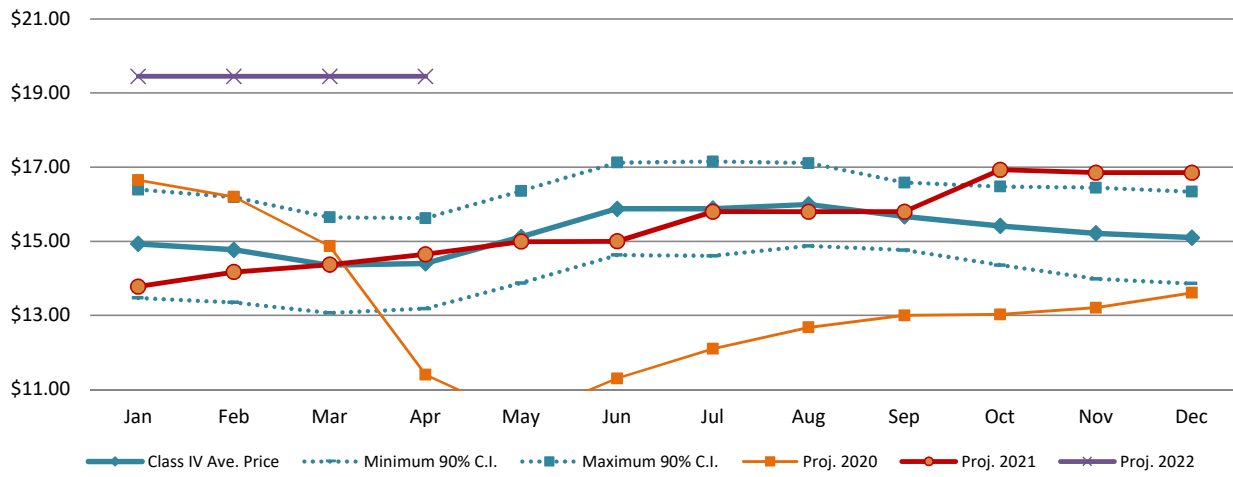
Class IV prices after the date of outlook are *Futures Prices*. The *Future Prices* are also shown in *color & italicized*. Average years do not include projected years.

Olympic averages eliminate the high and low observations and then average all remaining observations.

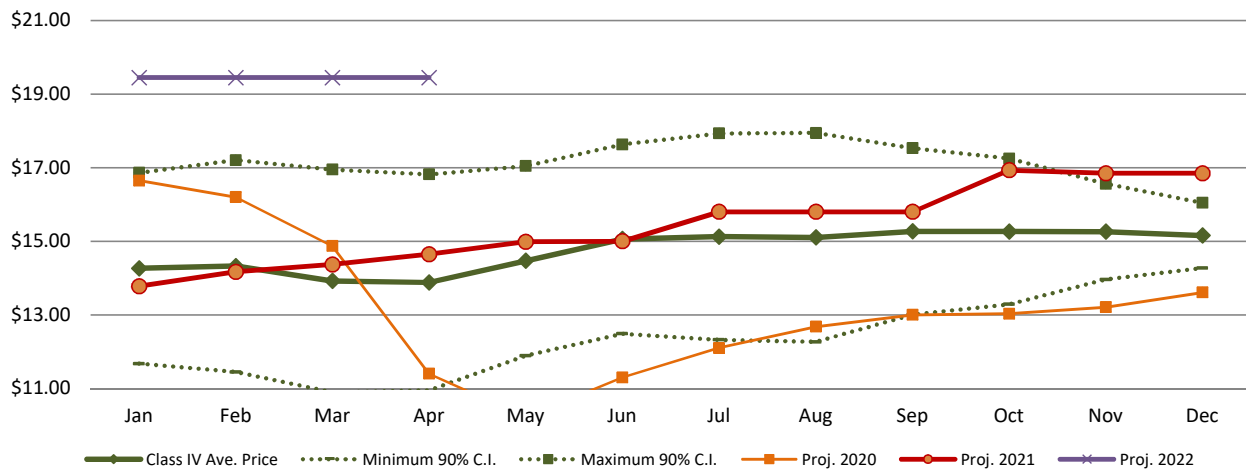
Exhibit 13B
Class IV Milk Price Information

Date Prepared: May 11, 2020

Class IV Prices – 3-Year Average



Class IV Prices – 5-Year Average



Class IV Prices – 10-Year Average

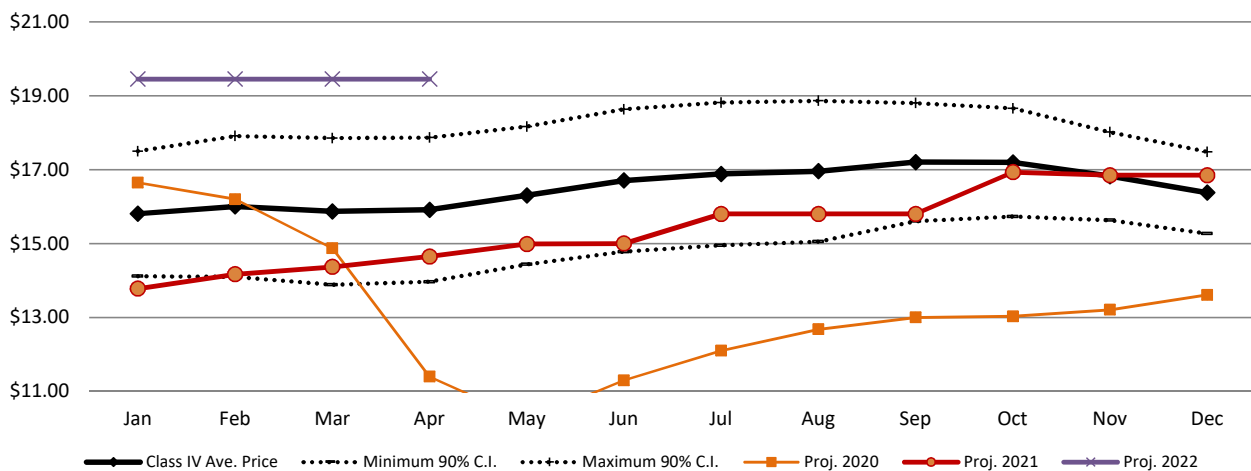


Exhibit 14 PA Basis for Class IV

Date Prepared: May 11, 2020

													Yearly Ranges		
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average	High	Low
2005	\$5.38	\$4.16	\$4.84	\$3.99	\$4.30	\$3.57	\$3.13	\$3.16	\$3.25	\$3.69	\$4.20	\$4.03	\$3.98	\$5.38	\$3.13
2006	\$4.10	\$4.70	\$4.12	\$3.44	\$3.17	\$3.28	\$3.29	\$3.16	\$3.00	\$3.69	\$3.29	\$3.20	\$3.54	\$4.70	\$3.00
2007	\$3.67	\$3.79	\$3.49	\$1.88	\$0.82	\$0.54	\$1.76	\$1.93	\$2.19	\$2.29	\$3.50	\$4.02	\$2.49	\$4.02	\$0.54
2008	\$6.31	\$6.33	\$4.93	\$5.34	\$4.24	\$4.38	\$4.80	\$3.86	\$5.05	\$5.78	\$6.95	\$6.75	\$5.39	\$6.95	\$3.86
2009	\$6.61	\$4.05	\$3.36	\$3.58	\$3.26	\$2.68	\$2.85	\$2.92	\$3.05	\$3.94	\$3.55	\$2.89	\$3.56	\$6.61	\$2.68
2010	\$4.15	\$5.20	\$4.08	\$2.57	\$1.61	\$2.05	\$2.35	\$3.32	\$2.84	\$3.15	\$3.52	\$3.87	\$3.23	\$5.20	\$1.61
2011	\$2.48	\$2.30	\$2.59	\$1.72	\$1.81	\$1.85	\$3.17	\$4.06	\$4.27	\$3.79	\$4.33	\$4.53	\$3.08	\$4.53	\$1.72
2012	\$4.34	\$3.68	\$3.65	\$3.60	\$4.35	\$4.26	\$3.55	\$3.14	\$3.39	\$4.26	\$4.94	\$4.87	\$4.00	\$4.94	\$3.14
2013	\$3.77	\$3.35	\$2.95	\$1.98	\$2.11	\$2.12	\$1.80	\$1.93	\$2.27	\$1.83	\$2.48	\$1.86	\$2.37	\$3.77	\$1.80
2014	\$2.61	\$2.44	\$3.04	\$3.46	\$3.55	\$1.97	\$1.62	\$2.41	\$4.82	\$4.75	\$6.09	\$5.90	\$3.56	\$6.09	\$1.62
2015	\$5.97	\$4.48	\$3.90	\$4.09	\$3.89	\$4.20	\$4.45	\$4.70	\$3.82	\$2.97	\$3.41	\$3.68	\$4.13	\$5.97	\$2.97
2016	\$4.09	\$3.61	\$3.56	\$3.52	\$2.81	\$2.03	\$2.06	\$2.85	\$3.65	\$4.04	\$4.34	\$4.43	\$3.42	\$4.43	\$2.03
2017	\$3.81	\$4.01	\$4.48	\$3.59	\$2.91	\$2.31	\$2.00	\$2.59	\$3.14	\$3.75	\$4.71	\$4.69	\$3.50	\$4.71	\$2.00
2018	\$3.87	\$3.03	\$2.96	\$2.92	\$2.13	\$2.09	\$2.06	\$1.77	\$2.29	\$3.09	\$2.94	\$2.51	\$2.64	\$3.87	\$1.77
2019	\$2.22	\$2.04	\$2.79	\$2.58	\$2.31	\$1.97	\$2.20	\$2.66	\$3.25	\$3.71	\$4.40	\$4.20	\$2.86	\$4.40	\$1.97
<i>Proj. 2020</i>	<i>\$3.55</i>	<i>\$3.20</i>	<i>\$4.03</i>	<i>\$3.17</i>	<i>\$2.83</i>	<i>\$3.88</i>	<i>\$4.35</i>	<i>\$4.59</i>	<i>\$4.72</i>	<i>\$4.97</i>	<i>\$4.99</i>	<i>\$4.61</i>	<i>\$4.07</i>	<i>\$4.99</i>	<i>\$2.83</i>
<i>Proj. 2021</i>	<i>\$4.90</i>	<i>\$4.43</i>	<i>\$3.83</i>	<i>\$3.29</i>	<i>\$2.74</i>	<i>\$2.91</i>	<i>\$2.30</i>	<i>\$2.06</i>	<i>\$2.59</i>	<i>\$1.84</i>	<i>\$1.65</i>	<i>\$2.25</i>	<i>\$2.90</i>	<i>\$4.90</i>	<i>\$1.65</i>
<i>Proj. 2022</i>	<i>-\$0.20</i>	<i>-\$0.45</i>	<i>-\$0.95</i>	<i>-\$1.20</i>									<i>-\$0.70</i>	<i>-\$0.20</i>	<i>-\$1.20</i>
3-Year Average*															
3-Yr. Ave.	\$3.30	\$3.03	\$3.41	\$3.03	\$2.45	\$2.12	\$2.09	\$2.34	\$2.89	\$3.52	\$4.02	\$3.80	\$3.00	\$4.02	\$2.09
Olympic Ave.	\$3.81	\$3.03	\$2.96	\$2.92	\$2.31	\$2.09	\$2.06	\$2.59	\$3.14	\$3.71	\$4.40	\$4.20	\$3.10	\$4.40	\$2.06
5-Year Average*															
5-Yr. Ave	\$3.99	\$3.43	\$3.54	\$3.34	\$2.81	\$2.52	\$2.55	\$2.91	\$3.23	\$3.51	\$3.96	\$3.90	\$3.31	\$3.99	\$2.52
Olympic Ave.	\$3.92	\$3.55	\$3.47	\$3.34	\$2.68	\$2.14	\$2.11	\$2.70	\$3.35	\$3.52	\$4.05	\$4.10	\$3.24	\$4.10	\$2.11
10-Year Average*															
10-Yr. Ave	\$3.73	\$3.41	\$3.40	\$3.00	\$2.75	\$2.49	\$2.53	\$2.94	\$3.37	\$3.53	\$4.12	\$4.05	\$3.28	\$4.12	\$2.49
Olympic Ave.	\$3.64	\$3.36	\$3.37	\$3.03	\$2.69	\$2.34	\$2.40	\$2.87	\$3.33	\$3.60	\$4.07	\$4.10	\$3.23	\$4.10	\$2.34

* Projected years are not included in these numbers.

Note:

Class IV Basis after the date of outlook are *Futures Prices*. The *Future Prices* are also shown in *color & italicized*. Average years do not include projected years.

Olympic averages eliminate the high and low observations and then average all remaining observations.

Table 15
Cheese Price per pound

Date Prepared: May 11, 2020

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly Ranges		
													Average	High	Low
2005	\$1.5165	\$1.5711	\$1.5061	\$1.5590	\$1.4765	\$1.4845	\$1.5156	\$1.4322	\$1.4958	\$1.4996	\$1.3968	\$1.3964	\$1.4875	\$1.5711	\$1.3964
2006	\$1.3895	\$1.2637	\$1.1612	\$1.1654	\$1.1694	\$1.2166	\$1.1793	\$1.1813	\$1.2912	\$1.2721	\$1.3123	\$1.3624	\$1.2470	\$1.3895	\$1.1612
2007	\$1.3366	\$1.3454	\$1.3732	\$1.4296	\$1.5946	\$1.8561	\$2.0002	\$1.9100	\$2.0250	\$1.9227	\$1.9652	\$2.0976	\$1.7380	\$2.0976	\$1.3366
2008	\$1.9998	\$1.8403	\$1.9575	\$1.8164	\$1.9525	\$2.1609	\$1.9585	\$1.8699	\$1.7773	\$1.9065	\$1.7511	\$1.7544	\$1.8954	\$2.1609	\$1.7511
2009	\$1.2961	\$1.1518	\$1.2611	\$1.2771	\$1.1553	\$1.1466	\$1.1334	\$1.2605	\$1.3522	\$1.4110	\$1.5169	\$1.5969	\$1.2966	\$1.5969	\$1.1334
2010	\$1.5374	\$1.5110	\$1.3632	\$1.3827	\$1.4257	\$1.4475	\$1.4567	\$1.6031	\$1.7016	\$1.7666	\$1.6152	\$1.4606	\$1.5226	\$1.7666	\$1.3632
2011	\$1.4076	\$1.7449	\$1.9722	\$1.6983	\$1.6534	\$1.8999	\$2.1243	\$2.1402	\$1.8592	\$1.7471	\$1.8415	\$1.8070	\$1.8246	\$2.1402	\$1.4076
2012	\$1.6097	\$1.5410	\$1.5248	\$1.5361	\$1.5215	\$1.5846	\$1.6857	\$1.7682	\$1.8647	\$2.0479	\$2.0146	\$1.7925	\$1.7076	\$2.0479	\$1.5215
2013	\$1.7485	\$1.6623	\$1.6467	\$1.7310	\$1.8274	\$1.7810	\$1.7142	\$1.7731	\$1.7961	\$1.8025	\$1.8612	\$1.8761	\$1.7683	\$1.8761	\$1.6467
2014	\$2.0838	\$2.2864	\$2.2689	\$2.3547	\$2.1703	\$2.0358	\$2.0482	\$2.1074	\$2.3472	\$2.2914	\$2.1305	\$1.7362	\$2.1551	\$2.3547	\$1.7362
2015	\$1.5807	\$1.5446	\$1.5750	\$1.6122	\$1.6557	\$1.7222	\$1.6997	\$1.7386	\$1.7145	\$1.6790	\$1.6503	\$1.5719	\$1.6454	\$1.7386	\$1.5446
2016	\$1.5178	\$1.5170	\$1.5162	\$1.5041	\$1.4104	\$1.4477	\$1.6419	\$1.8119	\$1.7514	\$1.5830	\$1.7596	\$1.7990	\$1.6050	\$1.8119	\$1.4104
2017	\$1.7011	\$1.6871	\$1.5551	\$1.4960	\$1.5390	\$1.6293	\$1.5430	\$1.6664	\$1.6608	\$1.7254	\$1.7617	\$1.6481	\$1.6344	\$1.7617	\$1.4960
2018	\$1.5175	\$1.4727	\$1.5542	\$1.5737	\$1.6353	\$1.6150	\$1.4868	\$1.5544	\$1.6533	\$1.5686	\$1.4463	\$1.3742	\$1.5377	\$1.6533	\$1.3742
2019	\$1.3868	\$1.3940	\$1.5383	\$1.6468	\$1.6974	\$1.6768	\$1.8486	\$1.8276	\$1.9053	\$1.9694	\$2.1723	\$2.0509	\$1.7595	\$2.1723	\$1.3868
<i>Proj. 2020</i>	<i>\$1.8092</i>	<i>\$1.7884</i>	<i>\$1.7091</i>	<i>\$1.4026</i>	<i>\$1.2400</i>	<i>\$1.4600</i>	<i>\$1.5500</i>	<i>\$1.6020</i>	<i>\$1.6440</i>	<i>\$1.6810</i>	<i>\$1.6730</i>	<i>\$1.6600</i>	<i>\$1.6016</i>	<i>\$1.8092</i>	<i>\$1.2400</i>
<i>Proj. 2021</i>	<i>\$1.6250</i>	<i>\$1.6350</i>	<i>\$1.6550</i>	<i>\$1.6460</i>	<i>\$1.6650</i>	<i>\$1.6970</i>	<i>\$1.7040</i>	<i>\$1.7250</i>	<i>\$1.7380</i>	<i>\$1.7300</i>	<i>\$1.7050</i>	<i>\$1.7000</i>	<i>\$1.6854</i>	<i>\$1.7380</i>	<i>\$1.6250</i>
<i>Proj. 2022</i>	<i>\$1.6750</i>	<i>\$1.6750</i>	<i>\$1.6750</i>	<i>\$1.6750</i>									<i>\$1.6750</i>	<i>\$1.6750</i>	<i>\$1.6750</i>
3-Year Average*															
3 Yr. Ave.	\$1.5351	\$1.5179	\$1.5492	\$1.5722	\$1.6239	\$1.6404	\$1.6261	\$1.6828	\$1.7398	\$1.7545	\$1.7934	\$1.6911	\$1.6439	\$1.7934	\$1.5179
Olympic Ave.	\$1.5175	\$1.4727	\$1.5542	\$1.5737	\$1.6353	\$1.6293	\$1.5430	\$1.6664	\$1.6608	\$1.7254	\$1.7617	\$1.6481	\$1.6157	\$1.7617	\$1.4727
5-Year Average*															
5 Yr. Ave	\$1.5408	\$1.5231	\$1.5478	\$1.5666	\$1.5876	\$1.6182	\$1.6440	\$1.7198	\$1.7371	\$1.7051	\$1.7580	\$1.6888	\$1.6364	\$1.7580	\$1.5231
Olympic Ave.	\$1.5387	\$1.5114	\$1.5492	\$1.5633	\$1.6100	\$1.6404	\$1.6282	\$1.7390	\$1.7089	\$1.6625	\$1.7239	\$1.6730	\$1.6290	\$1.7390	\$1.5114
10-Year Average*															
10 Yr. Ave	\$1.6091	\$1.6361	\$1.6515	\$1.6536	\$1.6536	\$1.6840	\$1.7249	\$1.7991	\$1.8254	\$1.8181	\$1.8253	\$1.7117	\$1.7160	\$1.8254	\$1.6091
Olympic Ave.	\$1.5775	\$1.5851	\$1.6103	\$1.5998	\$1.6194	\$1.6696	\$1.7085	\$1.7870	\$1.7817	\$1.7901	\$1.8293	\$1.7114	\$1.6892	\$1.8293	\$1.5775

* Projected years are not included in these numbers.

Note:

Cheese prices after the date of outlook are *Futures Prices*. The *Future Prices* are also shown in *color & italicized*. Average years do not include projected years.

Olympic averages eliminate the high and low observations and then average all remaining observations.

Table 16
Butterfat price per pound

Date Prepared: May 11, 2020

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly Ranges		
													Average	High	Low
2005	\$1.7330	\$1.7754	\$1.7279	\$1.6964	\$1.5475	\$1.5932	\$1.8007	\$1.8246	\$1.8872	\$1.8256	\$1.6114	\$1.5036	\$1.7105	\$1.8872	\$1.5036
2006	\$1.4684	\$1.3469	\$1.2596	\$1.2343	\$1.2582	\$1.2436	\$1.2228	\$1.3008	\$1.4191	\$1.4149	\$1.3852	\$1.3481	\$1.3252	\$1.4684	\$1.2228
2007	\$1.3009	\$1.3112	\$1.3769	\$1.4657	\$1.5706	\$1.6457	\$1.6110	\$1.5872	\$1.5101	\$1.4092	\$1.4077	\$1.4348	\$1.4693	\$1.6457	\$1.3009
2008	\$1.3319	\$1.3010	\$1.3604	\$1.4748	\$1.5562	\$1.6160	\$1.6774	\$1.7413	\$1.8196	\$1.8507	\$1.7730	\$1.2998	\$1.5668	\$1.8507	\$1.2998
2009	\$1.1084	\$1.0941	\$1.1594	\$1.2049	\$1.2648	\$1.2544	\$1.2438	\$1.2491	\$1.2226	\$1.2752	\$1.4656	\$1.5433	\$1.2571	\$1.5433	\$1.0941
2010	\$1.4405	\$1.4404	\$1.5347	\$1.5813	\$1.7058	\$1.7234	\$1.8964	\$2.0336	\$2.4044	\$2.4436	\$2.2422	\$1.7952	\$1.8535	\$2.4436	\$1.4404
2011	\$2.0239	\$2.2967	\$2.2859	\$2.2113	\$2.2497	\$2.3702	\$2.2511	\$2.2985	\$2.2005	\$1.9592	\$1.9508	\$1.7743	\$2.1560	\$2.3702	\$1.7743
2012	\$1.7178	\$1.5739	\$1.5297	\$1.5645	\$1.4462	\$1.4866	\$1.6556	\$1.8339	\$2.0047	\$2.1136	\$2.0218	\$1.7276	\$1.7230	\$2.1136	\$1.4462
2013	\$1.6168	\$1.6619	\$1.7476	\$1.8227	\$1.7884	\$1.6599	\$1.5693	\$1.5104	\$1.5196	\$1.6638	\$1.6336	\$1.7672	\$1.6634	\$1.8227	\$1.5104
2014	\$1.7874	\$2.0109	\$2.0402	\$2.1207	\$2.2721	\$2.4413	\$2.6349	\$2.8448	\$3.2467	\$2.8507	\$2.2011	\$2.0991	\$2.3792	\$3.2467	\$1.7874
2015	\$1.6855	\$1.8296	\$1.8444	\$1.8940	\$2.0599	\$2.1011	\$2.1125	\$2.2674	\$2.7531	\$2.9087	\$3.1830	\$2.9057	\$2.2954	\$3.1830	\$1.6855
2016	\$2.3062	\$2.3778	\$2.2028	\$2.2376	\$2.2846	\$2.4109	\$2.5964	\$2.4873	\$2.3082	\$2.0493	\$2.1044	\$2.3354	\$2.3084	\$2.5964	\$2.0493
2017	\$2.5253	\$2.4274	\$2.4176	\$2.3548	\$2.4134	\$2.7066	\$2.9456	\$3.0109	\$2.8559	\$2.6646	\$2.5546	\$2.4951	\$2.6143	\$3.0109	\$2.3548
2018	\$2.4531	\$2.3490	\$2.4273	\$2.5113	\$2.6239	\$2.6692	\$2.5287	\$2.6009	\$2.5442	\$2.5551	\$2.5385	\$2.5080	\$2.5258	\$2.6692	\$2.3490
2019	\$2.4981	\$2.5345	\$2.5461	\$2.5375	\$2.5718	\$2.6579	\$2.6858	\$2.6574	\$2.4982	\$2.4031	\$2.3195	\$2.1952	\$2.5088	\$2.6858	\$2.1952
<i>Proj. 2020</i>	<i>\$2.1117</i>	<i>\$1.9813</i>	<i>\$1.9177</i>	<i>\$1.3218</i>	<i>\$1.2576</i>	<i>\$1.4977</i>	<i>\$1.5846</i>	<i>\$1.6576</i>	<i>\$1.6957</i>	<i>\$1.7199</i>	<i>\$1.7629</i>	<i>\$1.7784</i>	<i>\$1.6906</i>	<i>\$2.1117</i>	<i>\$1.2576</i>
<i>Proj. 2021</i>	<i>\$1.8089</i>	<i>\$1.8652</i>	<i>\$1.8873</i>	<i>\$1.9633</i>	<i>\$1.9882</i>	<i>\$2.0106</i>	<i>\$2.0533</i>	<i>\$2.0811</i>	<i>\$2.1295</i>	<i>\$2.2143</i>	<i>\$2.2264</i>	<i>\$2.2264</i>	<i>\$2.0379</i>	<i>\$2.2264</i>	<i>\$1.8089</i>
<i>Proj. 2022</i>	<i>\$2.2325</i>	<i>\$2.4998</i>	<i>\$2.4998</i>	<i>\$2.4998</i>									<i>\$2.4330</i>	<i>\$2.4998</i>	<i>\$2.2325</i>
3-Year Average*															
3 Yr. Ave.	\$2.4922	\$2.4370	\$2.4637	\$2.4679	\$2.5364	\$2.6779	\$2.7200	\$2.7564	\$2.6328	\$2.5409	\$2.4709	\$2.3994	\$2.5496	\$2.7564	\$2.3994
Olympic Ave.	\$2.4981	\$2.4274	\$2.4273	\$2.5113	\$2.5718	\$2.6692	\$2.6858	\$2.6574	\$2.5442	\$2.5551	\$2.5385	\$2.4951	\$2.5484	\$2.6858	\$2.4273
5-Year Average*															
5 Yr. Ave	\$2.2936	\$2.3037	\$2.2876	\$2.3070	\$2.3907	\$2.5091	\$2.5738	\$2.6048	\$2.5919	\$2.5162	\$2.5400	\$2.4879	\$2.4505	\$2.6048	\$2.2876
Olympic Ave.	\$2.4191	\$2.3847	\$2.3492	\$2.3679	\$2.4233	\$2.5793	\$2.6036	\$2.5819	\$2.5985	\$2.5409	\$2.4709	\$2.4462	\$2.4805	\$2.6036	\$2.3492
10-Year Average*															
10 Yr. Ave	\$2.0055	\$2.0502	\$2.0576	\$2.0836	\$2.1416	\$2.2227	\$2.2876	\$2.3545	\$2.4336	\$2.3612	\$2.2750	\$2.1603	\$2.2028	\$2.4336	\$2.0055
Olympic Ave.	\$2.0111	\$2.0659	\$2.0626	\$2.0917	\$2.1682	\$2.2542	\$2.2952	\$2.3780	\$2.4462	\$2.3799	\$2.2416	\$2.1212	\$2.2096	\$2.4462	\$2.0111

* Projected years are not included in these numbers.

Note:

Butterfat prices after the date of outlook are *Projected/Futures Prices*. The *Protected/Future Prices* are also shown in *color & italicized*. Average years do not include projected years.

Olympic averages eliminate the high and low observations and then average all remaining observations.

Table 17
Protein price per pound

Date Prepared: May 11, 2020

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly Ranges		
													Average	High	Low
2005	\$2.5300	\$2.6613	\$2.5019	\$2.7055	\$2.5965	\$2.5741	\$2.4558	\$2.1619	\$2.3009	\$2.3780	\$2.2724	\$2.3846	\$2.4602	\$2.7055	\$2.1619
2006	\$2.3994	\$2.1220	\$1.8836	\$1.9238	\$1.9115	\$2.0790	\$1.9807	\$1.9050	\$2.1346	\$2.0775	\$2.2383	\$2.4388	\$2.0912	\$2.4388	\$1.8836
2007	\$2.4503	\$2.4125	\$2.4329	\$2.5212	\$2.9424	\$3.7059	\$4.2068	\$3.9412	\$4.3929	\$4.1695	\$4.3081	\$4.7061	\$3.5158	\$4.7061	\$2.4125
2008	\$4.4994	\$4.0180	\$4.3331	\$3.7579	\$4.1108	\$4.7193	\$4.0025	\$3.6497	\$3.2689	\$3.5490	\$3.1301	\$3.6390	\$3.8898	\$4.7193	\$3.1301
2009	\$2.3638	\$1.9139	\$2.1973	\$2.2009	\$1.7454	\$1.7283	\$1.6970	\$2.1009	\$2.4243	\$2.5584	\$2.6991	\$2.8751	\$2.2087	\$2.8751	\$1.6970
2010	\$2.7916	\$2.7066	\$2.1311	\$2.1449	\$2.1523	\$2.2040	\$2.0515	\$2.3788	\$2.3057	\$2.4739	\$2.1981	\$2.1706	\$2.3091	\$2.7916	\$2.0515
2011	\$1.7590	\$2.5586	\$3.3024	\$2.4984	\$2.3133	\$2.9807	\$3.8292	\$3.8305	\$3.0282	\$2.9211	\$3.2341	\$3.3404	\$2.9663	\$3.8305	\$1.7590
2012	\$2.7326	\$2.6627	\$2.6571	\$2.6568	\$2.7344	\$2.8952	\$3.0430	\$3.1211	\$3.2521	\$3.7278	\$3.7172	\$3.3113	\$3.0426	\$3.7278	\$2.6568
2013	\$3.2862	\$2.9609	\$2.8204	\$3.0130	\$3.3597	\$3.3455	\$3.2257	\$3.4775	\$3.5419	\$3.4107	\$3.6316	\$3.5390	\$3.3010	\$3.6316	\$2.8204
2014	\$4.1870	\$4.6044	\$4.5172	\$4.7089	\$3.9553	\$3.3437	\$3.1798	\$3.1496	\$3.4991	\$3.7362	\$3.9018	\$2.7387	\$3.7935	\$4.7089	\$2.7387
2015	\$2.6731	\$2.4051	\$2.4875	\$2.5551	\$2.5206	\$2.6915	\$2.6070	\$2.5692	\$1.9801	\$1.7019	\$1.3205	\$1.3599	\$2.2393	\$2.6915	\$1.3205
2016	\$1.8169	\$1.7389	\$1.9206	\$1.8450	\$1.4935	\$1.4807	\$1.9112	\$2.5738	\$2.5675	\$2.2975	\$2.8085	\$2.6922	\$2.0955	\$2.8085	\$1.4807
2017	\$2.1768	\$2.2348	\$1.8198	\$1.6955	\$1.7723	\$1.7545	\$1.2248	\$1.5536	\$1.6988	\$2.1084	\$2.3412	\$2.0378	\$1.8682	\$2.3412	\$1.2248
2018	\$1.6612	\$1.6265	\$1.8066	\$1.7810	\$1.8609	\$1.7478	\$1.4868	\$1.6245	\$2.0029	\$1.7185	\$1.3419	\$1.1417	\$1.6500	\$2.0029	\$1.1417
2019	\$1.1927	\$1.1776	\$1.6303	\$1.9890	\$2.1159	\$2.0046	\$2.4032	\$2.4453	\$2.8633	\$3.1700	\$3.9118	\$3.6515	\$2.3796	\$3.9118	\$1.1776
<i>Proj. 2020</i>	\$2.9606	\$3.0309	\$2.8424	\$2.4822	<i>\$2.3574</i>	<i>\$2.8135</i>	<i>\$3.0120</i>	<i>\$3.1028</i>	<i>\$3.1979</i>	<i>\$3.2917</i>	<i>\$3.2206</i>	<i>\$3.1625</i>	<i>\$2.9562</i>	<i>\$3.2917</i>	<i>\$2.3574</i>
<i>Proj. 2021</i>	<i>\$3.0175</i>	<i>\$2.9904</i>	<i>\$3.0316</i>	<i>\$2.9226</i>	<i>\$2.9576</i>	<i>\$3.0372</i>	<i>\$3.0148</i>	<i>\$3.0531</i>	<i>\$3.0440</i>	<i>\$2.9289</i>	<i>\$2.8356</i>	<i>\$2.8195</i>	<i>\$2.9711</i>	<i>\$3.0531</i>	<i>\$2.8195</i>
<i>Proj. 2022</i>	<i>\$2.7326</i>	<i>\$2.4511</i>	<i>\$2.4511</i>	<i>\$2.4511</i>									<i>\$2.5215</i>	<i>\$2.7326</i>	<i>\$2.4511</i>
3-Year Average*															
3 Yr. Ave.	\$1.6769	\$1.6796	\$1.7522	\$1.8218	\$1.9164	\$1.8356	\$1.7049	\$1.8745	\$2.1883	\$2.3323	\$2.5316	\$2.2770	\$1.9659	\$2.5316	\$1.6769
Olympic Ave.	\$1.6612	\$1.6265	\$1.8066	\$1.7810	\$1.8609	\$1.7545	\$1.4868	\$1.6245	\$2.0029	\$2.1084	\$2.3412	\$2.0378	\$1.8410	\$2.3412	\$1.4868
5-Year Average*															
5 Yr. Ave	\$1.9041	\$1.8366	\$1.9330	\$1.9731	\$1.9526	\$1.9358	\$1.9266	\$2.1533	\$2.2225	\$2.1993	\$2.3448	\$2.1766	\$2.0465	\$2.3448	\$1.8366
Olympic Ave.	\$1.8850	\$1.8667	\$1.8490	\$1.8717	\$1.9164	\$1.8356	\$1.9337	\$2.2130	\$2.1835	\$2.0415	\$2.1639	\$2.0300	\$1.9825	\$2.2130	\$1.8356
10-Year Average*															
10 Yr. Ave	\$2.4277	\$2.4676	\$2.5093	\$2.4888	\$2.4278	\$2.4448	\$2.4962	\$2.6724	\$2.6740	\$2.7266	\$2.8407	\$2.5983	\$2.5645	\$2.8407	\$2.4277
Olympic Ave.	\$2.3622	\$2.3618	\$2.3682	\$2.3104	\$2.3537	\$2.4528	\$2.4885	\$2.6675	\$2.6874	\$2.7285	\$2.8968	\$2.6487	\$2.5272	\$2.8968	\$2.3104

* Projected years are not included in these numbers.

Note:

Class III prices after the date of outlook are *Futures Prices*. The *Future Prices* are also shown in *color & italicized*. Average years do not include projected years.

Olympic averages eliminate the high and low observations and then average all remaining observations.

Table 18
Other Solids price per pound

Date Prepared: May 11, 2020

													Yearly Ranges		
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average	High	Low
2005	\$0.0899	\$0.0915	\$0.0951	\$0.1020	\$0.1043	\$0.1139	\$0.1240	\$0.1317	\$0.1411	\$0.1491	\$0.1606	\$0.1702	\$0.1228	\$0.1702	\$0.0899
2006	\$0.1881	\$0.1999	\$0.1874	\$0.1508	\$0.1251	\$0.1255	\$0.1257	\$0.1416	\$0.1649	\$0.2026	\$0.2276	\$0.2564	\$0.1746	\$0.2564	\$0.1251
2007	\$0.3183	\$0.4170	\$0.5257	\$0.6008	\$0.5791	\$0.5831	\$0.5534	\$0.4368	\$0.2890	\$0.2286	\$0.2461	\$0.2637	\$0.4201	\$0.6008	\$0.2286
2008	\$0.2097	\$0.0803	\$0.0493	\$0.0622	\$0.0766	\$0.0826	\$0.0707	\$0.0529	\$0.0234	(\$0.0047)	(\$0.0099)	(\$0.0269)	\$0.0555	\$0.2097	(\$0.0269)
2009	(\$0.0304)	(\$0.0437)	(\$0.0339)	(\$0.0043)	\$0.0336	\$0.0723	\$0.0949	\$0.0962	\$0.1018	\$0.1228	\$0.1524	\$0.1727	\$0.0612	\$0.1727	(\$0.0437)
2010	\$0.1946	\$0.1992	\$0.1823	\$0.1702	\$0.1704	\$0.1748	\$0.1700	\$0.1647	\$0.1673	\$0.1736	\$0.1797	\$0.1852	\$0.1777	\$0.1992	\$0.1647
2011	\$0.2002	\$0.2310	\$0.2665	\$0.2902	\$0.3026	\$0.3339	\$0.3608	\$0.3811	\$0.4053	\$0.4286	\$0.4521	\$0.4683	\$0.3434	\$0.4683	\$0.2002
2012	\$0.5032	\$0.4541	\$0.4239	\$0.4048	\$0.3500	\$0.3113	\$0.3123	\$0.3462	\$0.3971	\$0.4340	\$0.4624	\$0.4758	\$0.4063	\$0.5032	\$0.3113
2013	\$0.4647	\$0.4534	\$0.4179	\$0.3863	\$0.3887	\$0.3859	\$0.3927	\$0.3901	\$0.3914	\$0.3852	\$0.3955	\$0.3826	\$0.4029	\$0.4647	\$0.3826
2014	\$0.4155	\$0.4453	\$0.4700	\$0.4926	\$0.4897	\$0.4942	\$0.5046	\$0.5036	\$0.4876	\$0.4670	\$0.4505	\$0.3996	\$0.4684	\$0.5046	\$0.3996
2015	\$0.4001	\$0.3273	\$0.2918	\$0.4610	\$0.2533	\$0.2322	\$0.2004	\$0.1151	\$0.0465	\$0.0328	\$0.0361	\$0.0355	\$0.2027	\$0.4610	\$0.0328
2016	\$0.0371	\$0.0492	\$0.0501	\$0.0489	\$0.0529	\$0.0628	\$0.0774	\$0.0881	\$0.1096	\$0.1351	\$0.1750	\$0.2063	\$0.0910	\$0.2063	\$0.0371
2017	\$0.2503	\$0.2990	\$0.3345	\$0.3350	\$0.3196	\$0.3014	\$0.2599	\$0.2425	\$0.2241	\$0.1853	\$0.1644	\$0.1070	\$0.2519	\$0.3350	\$0.1070
2018	\$0.0787	\$0.0550	\$0.0556	\$0.0619	\$0.0742	\$0.1128	\$0.1422	\$0.1741	\$0.2098	\$0.2553	\$0.2714	\$0.2775	\$0.1474	\$0.2775	\$0.0550
2019	\$0.2898	\$0.2631	\$0.2200	\$0.1190	\$0.1847	\$0.1702	\$0.1689	\$0.1730	\$0.1758	\$0.1447	\$0.1112	\$0.1341	\$0.1795	\$0.2898	\$0.1112
<i>Proj. 2020</i>	<i>\$0.1417</i>	<i>\$0.1750</i>	<i>\$0.1810</i>	<i>\$0.1793</i>	<i>\$0.1832</i>	<i>\$0.1894</i>	<i>\$0.1966</i>	<i>\$0.2069</i>	<i>\$0.2110</i>	<i>\$0.2069</i>	<i>\$0.1948</i>	<i>\$0.1907</i>	<i>\$0.1881</i>	<i>\$0.2110</i>	<i>\$0.1417</i>
<i>Proj. 2021</i>	<i>\$0.1969</i>	<i>\$0.1943</i>	<i>\$0.1928</i>	<i>\$0.1951</i>	<i>\$0.1812</i>	<i>\$0.2085</i>	<i>\$0.2085</i>	<i>\$0.2085</i>	<i>\$0.2085</i>	<i>\$0.2085</i>	<i>\$0.2085</i>	<i>\$0.2085</i>	<i>\$0.2016</i>	<i>\$0.2085</i>	<i>\$0.1812</i>
<i>Proj. 2022</i>	<i>\$0.2085</i>	<i>\$0.2085</i>	<i>\$0.2085</i>	<i>\$0.2085</i>									<i>\$0.2085</i>	<i>\$0.2085</i>	<i>\$0.2085</i>
3-Year Average*															
3 Yr. Ave.	\$0.2063	\$0.2057	\$0.2034	\$0.1720	\$0.1928	\$0.1948	\$0.1903	\$0.1965	\$0.2032	\$0.1951	\$0.1823	\$0.1729	\$0.1929	\$0.2063	\$0.1720
Olympic Ave.	\$0.2503	\$0.2631	\$0.2200	\$0.1190	\$0.1847	\$0.1702	\$0.1689	\$0.1741	\$0.2098	\$0.1853	\$0.1644	\$0.1341	\$0.1870	\$0.2631	\$0.1190
5-Year Average*															
5 Yr. Ave	\$0.2112	\$0.1987	\$0.1904	\$0.2052	\$0.1769	\$0.1759	\$0.1698	\$0.1586	\$0.1532	\$0.1506	\$0.1516	\$0.1521	\$0.1745	\$0.2112	\$0.1506
Olympic Ave.	\$0.2063	\$0.2057	\$0.1891	\$0.1720	\$0.1707	\$0.1717	\$0.1705	\$0.1541	\$0.1651	\$0.1550	\$0.1502	\$0.1491	\$0.1716	\$0.2063	\$0.1491
10-Year Average*															
10 Yr. Ave	\$0.2834	\$0.2777	\$0.2713	\$0.2770	\$0.2586	\$0.2580	\$0.2589	\$0.2579	\$0.2615	\$0.2642	\$0.2698	\$0.2672	\$0.2671	\$0.2834	\$0.2579
Olympic Ave.	\$0.2867	\$0.2842	\$0.2741	\$0.2786	\$0.2554	\$0.2528	\$0.2509	\$0.2484	\$0.2601	\$0.2677	\$0.2750	\$0.2701	\$0.2670	\$0.2867	\$0.2484

* Projected years are not included in these numbers.

Note:

Other solids prices after the date of outlook are *Projected/Futures Prices*. The *Projected/Future Prices* are also shown in *color & italicized*. Average years do not include projected years.

Olympic averages eliminate the high and low observations and then average all remaining observations.

Table 19
Butter price per pound

Date Prepared: May 11, 2020

													Yearly Ranges		
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average	High	Low
2005	\$1.5592	\$1.5945	\$1.5549	\$1.5287	\$1.4046	\$1.4427	\$1.6156	\$1.6355	\$1.6877	\$1.6363	\$1.4578	\$1.3680	\$1.5405	\$1.6877	\$1.3680
2006	\$1.3387	\$1.2374	\$1.1647	\$1.1436	\$1.1635	\$1.1513	\$1.1340	\$1.1990	\$1.2976	\$1.2941	\$1.2693	\$1.2384	\$1.2193	\$1.3387	\$1.1340
2007	\$1.1991	\$1.2129	\$1.2676	\$1.3416	\$1.4290	\$1.4916	\$1.4627	\$1.4429	\$1.3789	\$1.2945	\$1.2933	\$1.3159	\$1.3442	\$1.4916	\$1.1991
2008	\$1.2301	\$1.2044	\$1.2539	\$1.3492	\$1.4170	\$1.4669	\$1.5180	\$1.5713	\$1.6365	\$1.6997	\$1.6356	\$1.2448	\$1.4356	\$1.6997	\$1.2044
2009	\$1.0868	\$1.0750	\$1.1289	\$1.1665	\$1.2159	\$1.2073	\$1.1986	\$1.2030	\$1.1811	\$1.2245	\$1.3817	\$1.4459	\$1.2096	\$1.4459	\$1.0750
2010	\$1.3610	\$1.3609	\$1.4388	\$1.4773	\$1.5801	\$1.5946	\$1.7375	\$1.8508	\$2.1570	\$2.1893	\$2.0230	\$1.6539	\$1.7020	\$2.1893	\$1.3609
2011	\$2.0239	\$2.0680	\$2.0591	\$1.9975	\$2.0292	\$2.1287	\$2.0304	\$2.0695	\$1.9886	\$1.7893	\$1.7824	\$1.6119	\$1.9649	\$2.1287	\$1.6119
2012	\$1.5900	\$1.4712	\$1.4347	\$1.4634	\$1.3657	\$1.3991	\$1.5386	\$1.6859	\$1.8269	\$1.9168	\$1.8410	\$1.5981	\$1.5943	\$1.9168	\$1.3657
2013	\$1.5066	\$1.5438	\$1.6146	\$1.6766	\$1.6483	\$1.5422	\$1.4674	\$1.4187	\$1.4263	\$1.5454	\$1.5205	\$1.6308	\$1.5451	\$1.6766	\$1.4187
2014	\$1.6475	\$1.8320	\$1.8562	\$1.9227	\$2.0477	\$2.1874	\$2.3473	\$2.5206	\$2.8525	\$2.5255	\$1.9891	\$1.9049	\$2.1361	\$2.8525	\$1.6475
2015	\$1.5633	\$1.6823	\$1.6945	\$1.7355	\$1.8725	\$1.9065	\$1.9159	\$2.0438	\$2.4490	\$2.5734	\$2.7999	\$2.5709	\$2.0673	\$2.7999	\$1.5633
2016	\$2.0759	\$2.1350	\$1.9905	\$2.0192	\$2.0580	\$2.1623	\$2.3155	\$2.2254	\$2.0775	\$1.8637	\$1.9092	\$2.1000	\$2.0777	\$2.3155	\$1.8637
2017	\$2.2568	\$2.1760	\$2.1679	\$2.1160	\$2.1644	\$2.4065	\$2.6039	\$2.6578	\$2.5298	\$2.3718	\$2.2810	\$2.2319	\$2.3303	\$2.6578	\$2.1160
2018	\$2.1972	\$2.1112	\$2.1759	\$2.2452	\$2.3382	\$2.3756	\$2.2596	\$2.3192	\$2.2724	\$2.2814	\$2.2677	\$2.2425	\$2.2572	\$2.3756	\$2.1112
2019	\$2.2343	\$2.2644	\$2.2740	\$2.2669	\$2.2952	\$2.3663	\$2.3893	\$2.3659	\$2.2344	\$2.1559	\$2.0869	\$1.9842	\$2.2431	\$2.3893	\$1.9842
<i>Proj. 2020</i>	\$1.9153	\$1.8076	\$1.7551	\$1.2630	<i>\$1.2100</i>	<i>\$1.4083</i>	<i>\$1.4800</i>	<i>\$1.5403</i>	<i>\$1.5718</i>	<i>\$1.5918</i>	<i>\$1.6273</i>	<i>\$1.6400</i>	<i>\$1.5675</i>	<i>\$1.9153</i>	<i>\$1.2100</i>
<i>Proj. 2021</i>	<i>\$1.6653</i>	<i>\$1.7118</i>	<i>\$1.7300</i>	<i>\$1.7928</i>	<i>\$1.8133</i>	<i>\$1.8318</i>	<i>\$1.8670</i>	<i>\$1.8900</i>	<i>\$1.9300</i>	<i>\$2.0000</i>	<i>\$2.0100</i>	<i>\$2.0100</i>	<i>\$1.8543</i>	<i>\$2.0100</i>	<i>\$1.6653</i>
<i>Proj. 2022</i>	<i>\$2.0150</i>	<i>\$2.2358</i>	<i>\$2.2358</i>	<i>\$2.2358</i>									<i>\$2.1806</i>	<i>\$2.2358</i>	<i>\$2.0150</i>
3-Year Average*															
3 Yr. Ave.	\$2.2294	\$2.1839	\$2.2059	\$2.2094	\$2.2659	\$2.3828	\$2.4176	\$2.4476	\$2.3455	\$2.2697	\$2.2119	\$2.1529	\$2.2769	\$2.4476	\$2.1529
Olympic Ave.	\$2.2343	\$2.1760	\$2.1759	\$2.2452	\$2.2952	\$2.3756	\$2.3893	\$2.3659	\$2.2724	\$2.2814	\$2.2677	\$2.2319	\$2.2759	\$2.3893	\$2.1759
5-Year Average*															
5 Yr. Ave	\$2.0655	\$2.0738	\$2.0606	\$2.0766	\$2.1457	\$2.2434	\$2.2968	\$2.3224	\$2.3126	\$2.2492	\$2.2689	\$2.2259	\$2.1951	\$2.3224	\$2.0606
Olympic Ave.	\$2.1691	\$2.1407	\$2.1114	\$2.1268	\$2.1725	\$2.3014	\$2.3215	\$2.3035	\$2.3186	\$2.2697	\$2.2119	\$2.1915	\$2.2199	\$2.3215	\$2.1114
10-Year Average*															
10 Yr. Ave	\$1.8457	\$1.8645	\$1.8706	\$1.8920	\$1.9399	\$2.0069	\$2.0605	\$2.1158	\$2.1814	\$2.1213	\$2.0501	\$1.9529	\$1.9918	\$2.1814	\$1.8457
Olympic Ave.	\$1.8548	\$1.8774	\$1.8747	\$1.8988	\$1.9619	\$2.0330	\$2.0668	\$2.1351	\$2.1920	\$2.1367	\$2.0225	\$1.9200	\$1.9978	\$2.1920	\$1.8548

* Projected years are not included in these numbers.

Note:

Butter prices after the date of outlook are *Futures Prices*. The *Future Prices* are also shown in *color & italicized*. Average years do not include projected years.

Olympic averages eliminate the high and low observations and then average all remaining observations.

Table 20
Dry whey price per pound

Date Prepared: May 11, 2020

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly Ranges		
													Average	High	Low
2005	\$0.2463	\$0.2478	\$0.2513	\$0.2580	\$0.2603	\$0.2696	\$0.2794	\$0.2869	\$0.2960	\$0.3038	\$0.3149	\$0.3242	\$0.2782	\$0.3242	\$0.2463
2006	\$0.3416	\$0.3531	\$0.3409	\$0.3054	\$0.2805	\$0.2808	\$0.2810	\$0.2965	\$0.3191	\$0.3557	\$0.3800	\$0.4079	\$0.3285	\$0.4079	\$0.2805
2007	\$0.4680	\$0.6005	\$0.7060	\$0.7789	\$0.7578	\$0.7617	\$0.7329	\$0.6197	\$0.4762	\$0.4175	\$0.4345	\$0.4516	\$0.6004	\$0.7789	\$0.4175
2008	\$0.3992	\$0.2736	\$0.2435	\$0.2560	\$0.2700	\$0.2758	\$0.2642	\$0.2470	\$0.2183	\$0.1945	\$0.1895	\$0.1730	\$0.2504	\$0.3992	\$0.1730
2009	\$0.1696	\$0.1567	\$0.1662	\$0.1949	\$0.2317	\$0.2693	\$0.2912	\$0.2925	\$0.2979	\$0.3183	\$0.3471	\$0.3668	\$0.2585	\$0.3668	\$0.1567
2010	\$0.3880	\$0.3925	\$0.3761	\$0.3643	\$0.3645	\$0.3688	\$0.3641	\$0.3590	\$0.3615	\$0.3676	\$0.3736	\$0.3789	\$0.3716	\$0.3925	\$0.3590
2011	\$0.3935	\$0.4234	\$0.4578	\$0.4808	\$0.4929	\$0.5233	\$0.5494	\$0.5691	\$0.5926	\$0.6152	\$0.6380	\$0.6538	\$0.5325	\$0.6538	\$0.3935
2012	\$0.6876	\$0.6400	\$0.6107	\$0.5921	\$0.5389	\$0.5013	\$0.5023	\$0.5352	\$0.5846	\$0.6205	\$0.6480	\$0.6610	\$0.5935	\$0.6876	\$0.5013
2013	\$0.6503	\$0.6393	\$0.6048	\$0.5741	\$0.5765	\$0.5738	\$0.5804	\$0.5778	\$0.5791	\$0.5731	\$0.5831	\$0.5706	\$0.5902	\$0.6503	\$0.5706
2014	\$0.6025	\$0.6314	\$0.6554	\$0.6774	\$0.6745	\$0.6789	\$0.6890	\$0.6880	\$0.6725	\$0.6525	\$0.6365	\$0.5871	\$0.6538	\$0.6890	\$0.5871
2015	\$0.5875	\$0.5169	\$0.4824	\$0.4610	\$0.4450	\$0.4245	\$0.3937	\$0.3108	\$0.2442	\$0.2309	\$0.2341	\$0.2336	\$0.3804	\$0.5875	\$0.2309
2016	\$0.2351	\$0.2469	\$0.2477	\$0.2466	\$0.2505	\$0.2601	\$0.2742	\$0.2846	\$0.3055	\$0.3303	\$0.3690	\$0.3994	\$0.2875	\$0.3994	\$0.2351
2017	\$0.4421	\$0.4894	\$0.5239	\$0.5243	\$0.5094	\$0.4917	\$0.4514	\$0.4345	\$0.4167	\$0.3790	\$0.3587	\$0.3030	\$0.4437	\$0.5243	\$0.3030
2018	\$0.2755	\$0.2525	\$0.2531	\$0.2592	\$0.2711	\$0.3086	\$0.3372	\$0.3681	\$0.4028	\$0.4470	\$0.4626	\$0.4685	\$0.3422	\$0.4685	\$0.2525
2019	\$0.4805	\$0.4545	\$0.4127	\$0.3923	\$0.3784	\$0.3643	\$0.3631	\$0.3671	\$0.3698	\$0.3396	\$0.3071	\$0.3293	\$0.3799	\$0.4805	\$0.3071
<i>Proj. 2020</i>	<i>\$0.3367</i>	<i>\$0.3690</i>	<i>\$0.3748</i>	<i>\$0.3732</i>	<i>\$0.3770</i>	<i>\$0.3830</i>	<i>\$0.3900</i>	<i>\$0.4000</i>	<i>\$0.4040</i>	<i>\$0.4000</i>	<i>\$0.3883</i>	<i>\$0.3843</i>	<i>\$0.3817</i>	<i>\$0.4040</i>	<i>\$0.3367</i>
<i>Proj. 2021</i>	<i>\$0.3903</i>	<i>\$0.3878</i>	<i>\$0.3863</i>	<i>\$0.3885</i>	<i>\$0.3750</i>	<i>\$0.4015</i>	<i>\$0.4015</i>	<i>\$0.4015</i>	<i>\$0.4015</i>	<i>\$0.4015</i>	<i>\$0.4015</i>	<i>\$0.4015</i>	<i>\$0.3949</i>	<i>\$0.4015</i>	<i>\$0.3750</i>
<i>Proj. 2022</i>	<i>\$0.4015</i>	<i>\$0.4015</i>	<i>\$0.4015</i>	<i>\$0.4015</i>									<i>\$0.4015</i>	<i>\$0.4015</i>	<i>\$0.4015</i>
3-Year Average*															
3 Yr. Ave.	\$0.3994	\$0.3988	\$0.3966	\$0.3919	\$0.3863	\$0.3882	\$0.3839	\$0.3899	\$0.3964	\$0.3885	\$0.3761	\$0.3669	\$0.3886	\$0.3994	\$0.3669
Olympic Ave.	\$0.4421	\$0.4545	\$0.4127	\$0.3923	\$0.3784	\$0.3643	\$0.3631	\$0.3681	\$0.4028	\$0.3790	\$0.3587	\$0.3293	\$0.3871	\$0.4545	\$0.3293
5-Year Average*															
5 Yr. Ave	\$0.4041	\$0.3920	\$0.3840	\$0.3767	\$0.3709	\$0.3698	\$0.3639	\$0.3530	\$0.3478	\$0.3454	\$0.3463	\$0.3468	\$0.3667	\$0.4041	\$0.3454
Olympic Ave.	\$0.3994	\$0.3988	\$0.3827	\$0.3708	\$0.3648	\$0.3658	\$0.3647	\$0.3487	\$0.3594	\$0.3496	\$0.3449	\$0.3439	\$0.3661	\$0.3994	\$0.3439
10-Year Average*															
10 Yr. Ave	\$0.4743	\$0.4687	\$0.4625	\$0.4572	\$0.4502	\$0.4495	\$0.4505	\$0.4494	\$0.4529	\$0.4556	\$0.4611	\$0.4585	\$0.4575	\$0.4743	\$0.4494
Olympic Ave.	\$0.4775	\$0.4750	\$0.4652	\$0.4560	\$0.4471	\$0.4445	\$0.4427	\$0.4402	\$0.4516	\$0.4590	\$0.4661	\$0.4613	\$0.4572	\$0.4775	\$0.4402

* Projected years are not included in these numbers.

Note:

Dry Whey prices after the date of outlook are *Futures Prices*. The *Future Prices* are also shown in *color & italicized*. Average years do not include projected years.

Olympic averages eliminate the high and low observations and then average all remaining observations.

Exhibit 21 Dairy-DMC IOFC per Cwt.

Date Prepared: May 11, 2020

													Yearly Ranges		
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average	High	Low
2005	\$11.11	\$10.89	\$10.70	\$10.20	\$9.65	\$9.26	\$9.51	\$9.77	\$10.52	\$10.89	\$10.61	\$9.99	\$10.26	\$11.11	\$9.26
2006	\$9.70	\$8.69	\$7.73	\$7.07	\$6.82	\$6.77	\$6.74	\$7.09	\$7.78	\$7.91	\$7.90	\$8.02	\$7.69	\$9.70	\$6.74
2007	\$8.29	\$8.10	\$8.75	\$9.83	\$10.85	\$12.85	\$14.64	\$14.66	\$14.46	\$14.09	\$14.28	\$13.29	\$12.01	\$14.66	\$8.10
2008	\$11.93	\$9.80	\$8.65	\$8.06	\$7.93	\$8.18	\$8.29	\$7.69	\$7.84	\$8.75	\$8.30	\$7.14	\$8.55	\$11.93	\$7.14
2009	\$4.34	\$3.33	\$3.63	\$3.58	\$2.73	\$2.25	\$3.11	\$3.96	\$5.13	\$6.44	\$7.48	\$8.69	\$4.56	\$8.69	\$2.25
2010	\$8.34	\$8.41	\$7.40	\$7.27	\$7.61	\$7.95	\$8.25	\$8.73	\$9.36	\$9.88	\$8.90	\$7.28	\$8.28	\$9.88	\$7.27
2011	\$7.03	\$8.64	\$9.98	\$8.10	\$7.69	\$9.27	\$9.85	\$9.36	\$9.07	\$8.74	\$9.37	\$8.77	\$8.82	\$9.98	\$7.03
2012	\$7.56	\$5.88	\$4.96	\$4.22	\$3.40	\$3.45	\$2.67	\$2.98	\$5.50	\$7.73	\$8.11	\$7.18	\$5.30	\$8.11	\$2.67
2013	\$6.29	\$5.72	\$5.24	\$6.00	\$5.77	\$4.67	\$4.85	\$6.68	\$7.97	\$9.85	\$11.04	\$11.04	\$7.09	\$11.04	\$4.67
2014	\$12.70	\$13.91	\$14.10	\$13.65	\$12.26	\$11.65	\$12.68	\$13.74	\$15.40	\$15.62	\$13.39	\$10.66	\$13.32	\$15.62	\$10.66
2015	\$8.34	\$7.66	\$7.53	\$7.48	\$7.83	\$8.16	\$7.45	\$7.94	\$8.95	\$9.22	\$10.01	\$9.10	\$8.30	\$10.01	\$7.45
2016	\$8.20	\$7.91	\$7.46	\$6.72	\$5.62	\$5.99	\$8.01	\$9.25	\$9.91	\$8.91	\$9.88	\$11.10	\$8.21	\$11.10	\$5.62
2017	\$11.06	\$10.58	\$9.35	\$8.55	\$8.33	\$9.33	\$9.08	\$10.27	\$9.99	\$10.00	\$10.39	\$9.36	\$9.71	\$11.06	\$8.55
2018	\$8.12	\$6.88	\$6.77	\$6.62	\$6.78	\$7.37	\$6.72	\$7.43	\$8.26	\$8.96	\$8.66	\$7.85	\$7.53	\$8.96	\$6.62
2019	\$7.71	\$7.91	\$8.66	\$8.82	\$9.00	\$8.63	\$9.27	\$9.85	\$10.41	\$10.88	\$12.21	\$11.95	\$9.61	\$12.21	\$7.71
2020	\$10.72	\$10.06	\$9.15	\$4.76	\$4.76	\$4.76	\$3.93	\$3.92	\$3.86	\$5.20	\$5.20	\$5.08	\$5.95	\$10.72	\$3.86
3-Year Average*															
3 Yr. Ave.	\$8.96	\$8.46	\$8.26	\$8.00	\$8.13	\$8.44	\$8.35	\$9.18	\$9.55	\$9.95	\$10.42	\$9.72	\$8.95	\$10.42	\$8.00
Olympic Ave.	\$8.12	\$7.91	\$8.66	\$8.55	\$8.61	\$8.63	\$9.08	\$9.85	\$9.99	\$10.00	\$10.39	\$9.36	\$9.10	\$10.39	\$7.91
5-Year Average*															
5 Yr. Ave.	\$8.68	\$8.19	\$7.95	\$7.64	\$7.57	\$7.90	\$8.10	\$8.95	\$9.40	\$9.59	\$10.23	\$9.87	\$8.67	\$10.23	\$7.57
Olympic Ave.	\$8.22	\$7.83	\$7.88	\$7.58	\$7.74	\$8.05	\$8.18	\$9.02	\$9.45	\$9.39	\$10.09	\$9.85	\$8.61	\$10.09	\$7.58
10-Year Average*															
10 Yr. Ave.	\$8.53	\$8.35	\$8.14	\$7.74	\$7.46	\$7.65	\$7.88	\$8.62	\$9.43	\$9.98	\$10.20	\$9.43	\$8.62	\$10.20	\$7.46
Olympic Ave.	\$8.30	\$7.98	\$7.80	\$7.45	\$7.36	\$7.67	\$7.93	\$8.69	\$9.18	\$9.55	\$10.06	\$9.40	\$8.45	\$10.06	\$7.36

* Projected years are not included in these numbers.

Note:

Dairy-MPP IOFC per Cwt. prices after the date of outlook are *Futures Prices*. The *Future Prices* are also shown in *color & italicized*. Average years do not include projected years. Olympic averages eliminate the high and low observations and then average all remaining observations.

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Sources

AgChoice Farm Credit, 2011-2019 Dairy Success and Profitability Review, www.agchoice.com

Farm Credit East, 2003-2018 Dairy Farm Summary, www.farmcrediteast.com

Chicago Mercantile Exchange, www.cmegroup.com

United States Department of Agriculture, National Agricultural Statistics Service, <http://www.nass.usda.gov>

United States Department of Agriculture, Economic Research Service, <http://www.ers.usda.gov>

U.S. Dairy Statistics, Progressive Dairyman, <https://www.progressivepublish.com/downloads/>

Northeast Milk Marketing Area Administrator, Uniform Price and Producer Price Differential, <http://www.fmmone.com>

Understanding Dairy Markets, www.dairymarkets.org and <https://dairy.aae.wisc.edu/dairy-marketing-tools/>

National Milk Producers Federation, <http://www.nmpf.org>