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**Before the US House of Representatives Committee on Agriculture, Subcommittee on
Livestock and Foreign Agriculture**

April 30, 2019

Chairman Costa, Ranking Member Rouzer and Members of the Subcommittee, thank you for the opportunity to testify regarding the financial situation for US dairy farmers and the expected results from the dairy policy changes made in the Agriculture Improvement Act of 2018. I am an agricultural extension economist at the University of Missouri and over the last three decades I have spent much of my time examining the economic outlook and federal policies facing the dairy industry.

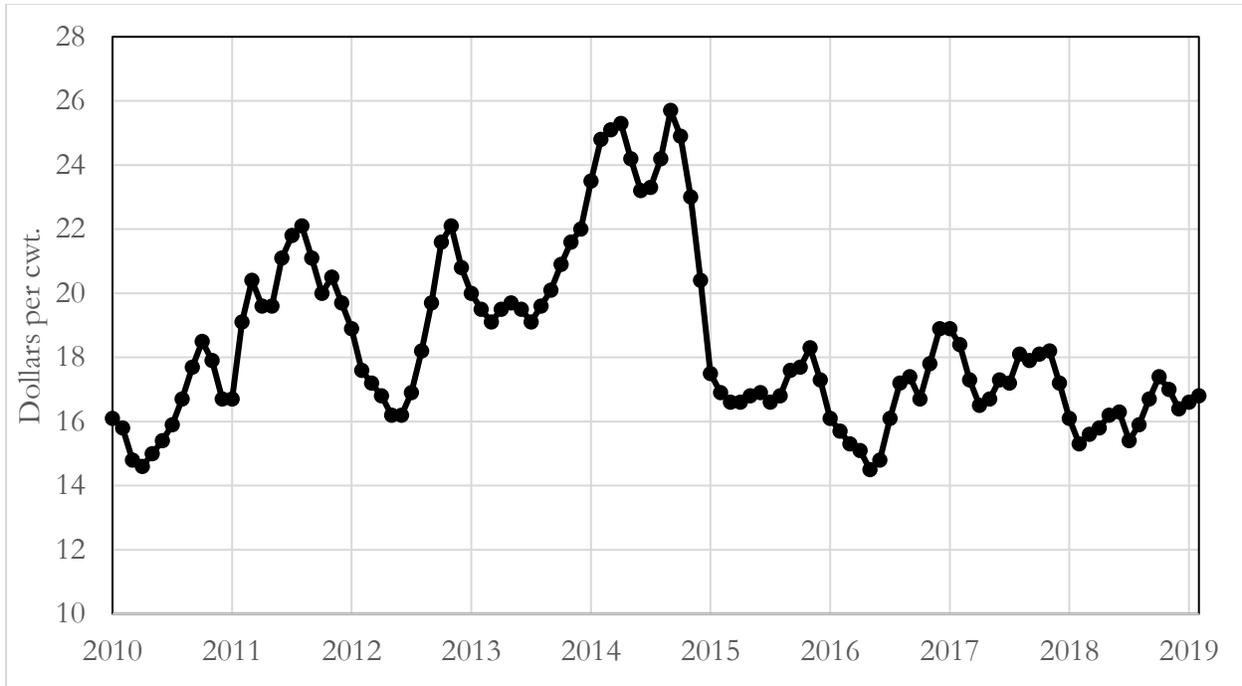
Since the record setting milk prices received by dairy producers in 2014, milk prices have been at lower levels and shown less variability. Over the 2010 to 2014 period there was a range of \$11.10 per cwt from the high to low monthly milk price, while over the 2015 to early 2019 period the difference between the maximum and minimum has been only \$4.40 per cwt. While the low milk price during these two periods is very similar, the highest monthly milk price since 2015 is well below the maximum from 2010 to 2014.

The factors that have led to this longer period of more stable but lower milk prices have been debated within the dairy industry. It remains difficult to attribute lower milk prices to any particular reason, but rather a combination of many market factors.

Despite an incredibly tough financial environment for dairy produces across the country, milk supplies have continued to expand. The most recent USDA Milk Production report with data for March 2019 showed that for the first time since January 2016 (excluding leap year effects), US milk production fell by 0.4% relative to year earlier levels. The longer-term expansion in milk production occurred despite continued reductions in the number of dairy operations. The number of licensed

dairy operations fell by 2,731 or 6.8% in 2018 as financial stress pushed many of these operations out of business. If

Figure 1. Monthly US All Milk Price



the recent decline in milk supplies continues for the rest of this year, that could provide even more milk price strength in the second half of 2019. However, the structural change in dairy operations and milk production that has unfolded over the past few years highlights the increased possibility of these longer periods of low profitability occurring in the future.

The stubborn continued growth in US milk supplies over the last few years has contributed to the tough financial conditions that have plagued the industry. Dairy operation equity built during the record 2014 milk prices and the apparent economies of scale in the industry has left aggregate milk supplies very unresponsive in time periods that are financially stressed. Although the equity built during 2014 has dissipated, the increase in the average dairy operation size and economies of scale may result in additional future periods of slow reduction in aggregate milk supplies when the economic situation is stressed. Despite slow supply response in low return periods, the industry can expand rapidly in periods of strong profitability.

The cost of purchasing dairy feed has fallen the last few years as most feed ingredient prices declined from the peaks of a few years ago. However, the costs required to grow feedstuffs have remained

high and created additional financial strain for those producers that grow a significant portion of their feed.

Poor domestic demand for some dairy products has contributed to the weakness in milk prices. Per capita consumption of 2% and lowfat fluid milk has declined by 33 pounds over the 2010 to 2018 period and has not been offset by recent increases in whole fat fluid milk consumption. It remains critical for future milk prices to find ways to expand domestic consumption of US dairy products.

US dairy exports are also important to the outlook for US dairy farmers. According to USDA/ERS, US commercial dairy exports grew by 36 billion pounds on a milk-equivalent skim-solids basis over the 2000 to 2018 period while domestic commercial disappearance grew by only 23 billion pounds. The story changes on a milk-equivalent milk-fat basis, with domestic commercial disappearance growing by 44 billion pounds and commercial exports growing by only 9 billion pounds. However, the point remains that growth in US dairy exports is vital. The implementation of new trade agreements like the current efforts with China and ratification of the new USMCA agreement remain critical.

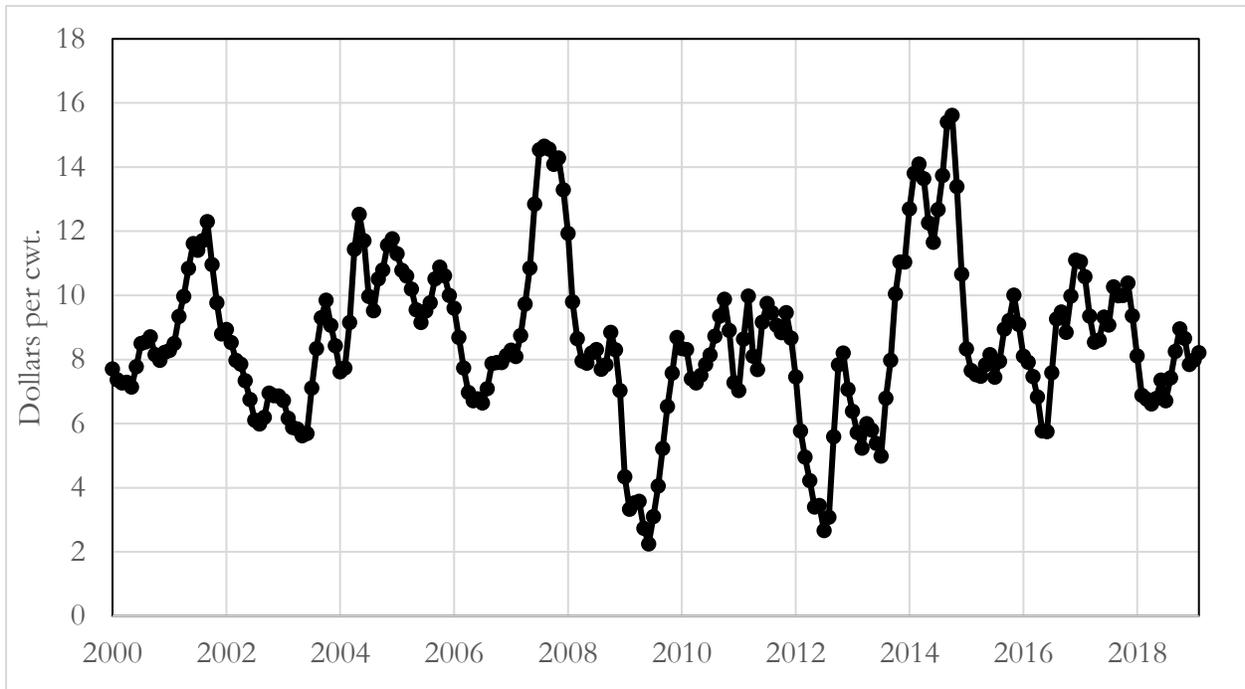
With the supply of milk and demand for milk and dairy products extremely price inelastic, small changes in either demand or supply can move milk prices dramatically higher or lower in just a few months and this potential volatility should not be ignored even though milk prices have been moving in a small range for the past few years.

The current long-term outlooks provided by the Food and Agricultural Policy Research Institute (FAPRI) and USDA estimate that the US all milk price will not exceed \$18 per cwt on an annual basis until after 2022. These forecasts suggest no quick relief from the current financial downturn, but rather a slow recovery that occurs over the next three to four years barring some external unanticipated shock that cuts milk supplies or creates new demand.

The new dairy policy provisions contained in the Agriculture Improvement Act of 2018 (2018 farm bill) considerably strengthen the dairy safety net relative to the Margin Protection Program (MPP) provisions in the Agricultural Act of 2014 (2014 farm bill). The level of coverage has increased, and the cost of program participation has declined. It remains important to highlight the strengthened provisions contained in the 2018 farm bill.

The current Dairy Margin Coverage (DMC) program is a milk price less feed cost triggered program. It is meant to protect against low milk prices and/or high feed costs which make up most of a producer's production cost. The DMC margin is calculated on a national basis using the most commonly used national prices for milk, corn, and alfalfa from USDA/NASS and soybean meal from

Figure 2. Monthly Dairy Margin Coverage (DMC) Margin



USDA/AMS. This margin will not perfectly represent any particular dairy farmer's milk price less feed cost margin but provides a national average margin. The key issue regarding how well the DMC margin works for an individual producer rests in the degree of correlation between the individual producer's milk less feed cost margin and the DMC margin. My experience has suggested that in many cases there will be a high correlation between an individual's margin and the DMC margin.

The DMC program is a voluntary annual program that allows a dairy farmer to pick a margin level to protect from between \$4.00 and \$9.50 per cwt with higher producer premiums as the margin level covered increases. Producers can cover between 5 and 95 percent of their FSA-calculated production history. The first 5 million pounds of production history (tier 1) covered occurs at lower premiums relative to production history covered above 5 million pounds. The premium costs at alternative DMC margin levels are listed in table 1.

Tier 1 premiums at the higher coverage levels are much lower than the original 2014 farm bill MPP premiums. For example, the original MPP premium cost at \$8.00 coverage was \$0.475 per cwt, lowered in 2018 to \$0.142 per cwt under the Bipartisan Budget Act of 2018. The 2018 farm bill tier 1 premium is lowered further to \$0.10 per cwt at the \$8.00 level. Even the new \$9.00 coverage option has a tier 1 premium that is less than the premium offered for \$8.00 coverage under the BBA18. Producers can shave a further 25 percent off their premium costs if they sign up for the entire five-year period during the initial signup.

Table 1. DMC Premium Costs

Coverage	Premiums for:	
	Tier 1, < 5 Mill. Lbs.	Tier 2, > 5 Mill. Lbs.
\$4.00	\$0.0000	\$0.0000
\$4.50	\$0.0025	\$0.0025
\$5.00	\$0.0050	\$0.0050
\$5.50	\$0.0300	\$0.1000
\$6.00	\$0.0500	\$0.3100
\$6.50	\$0.0700	\$0.6500
\$7.00	\$0.0800	\$1.1070
\$7.50	\$0.0900	\$1.4130
\$8.00	\$0.1000	\$1.8130
\$8.50	\$0.1050	n/a
\$9.00	\$0.1100	n/a
\$9.50	\$0.1500	n/a

A few points are important relative to the strengthened safety net provided by the DMC program. Over the 2000 to 2018 period, DMC coverage at \$9.50 would have resulted in a triggered payment approximately 70 percent of the time while the \$8.00 maximum MPP coverage level triggered a payment a little more than 40 percent of the time. DMC will trigger payments more often than MPP for those producers who choose the new higher coverage levels allowed under DMC.

Using the 2019 FAPRI baseline, I estimate that at the \$9.50 DMC coverage level payments will trigger 56 percent of the time with an average payment of \$1.68 per cwt over the 2019 to 2029 period.

The DMC program change that increases to 5 million pounds the amount of production history covered at lower premiums and the change to cover between 5 and 95 percent of a producer's production history allows for a larger proportion of US milk supplies to be covered at the lower

premium levels. Even most large dairy producers can cover their first 5 million pounds of production history.

Using recently released 2017 agricultural census data, roughly one-third of current milk production could choose to be covered under the tier 1 DMC program premiums. Given expected growth in US milk production over time, the percentage of current milk production that could be covered will decline about 1 to 1.5 percent per year.

It remains important to think through the added support provided under the DMC program. An individual producer who chooses not to sign up for coverage under DMC while the majority of other producers do could find themselves at a serious financial disadvantage, as those that participate receive significant payment from the program to help offset low margin periods. Given the program is not triggered off of current production but rather a producer's production history lessens the likelihood that the DMC program is supply-inducing but it may stall a reduction in milk production during tough financial periods.

It appears the DMC program will provide a needed boost to the dairy safety net and builds on the new policy direction laid out in the MPP. The combination of lower premiums, added flexibility in production history covered and higher margin protection levels results in a much more effective safety program than the dairy industry has had for some time. Dairy producers, regardless of size, must examine how the DMC program fits into their overall risk management plan.

Mr. Chairman, thank you for the opportunity to discuss the many issues facing the dairy industry today. I look forward to answering questions you have.

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Position

Director of Strategic Partnerships, College of Agriculture and Natural Resources,
Extension Associate Professor, Department of Agricultural and Applied Economics,
University of Missouri

Education and Degrees Awarded

Ph.D., Agricultural Economics University
of Missouri (1994)
M.S., Agricultural Economics University of
Missouri (1991)
B.S., Agricultural Business
Northwest Missouri State University (1986)

Academic Appointments

Director of Strategic Partnerships: 2018 – present
Research Associate Professor: 2018 – present
Research Assistant Professor: 1998 – 2015
Associate Director, FAPRI-University of Missouri: 2005 – 2012
Program Director, FAPRI-University of Missouri: 1993 – 2005

Honors/Awards

- **2016 C. Brice Ratchford Memorial Fellowship**- University of Missouri
- **2013 MU Excellence in Education Award** – University of Missouri
- **Missouri Institute of Cooperatives - 2013 Special Friends of Missouri Cooperatives**
- **2005 National winner of the Farm and Ranch Financial Management Program Award** given by the National Association of County Agricultural Agents
- **2002 USDA Group Honor Award for Excellence** – to FAPRI analysts
- **1991 Distinguished Policy Contribution Award** – American Agricultural Economics Association.

Federal Testimony and Reports

February 15, 2017 Congressional testimony before the United States House of Representatives, House Committee on Agriculture; Rural Economic Outlook: Setting the Stage for the Next Farm Bill, **“The Market and Policy Outlook for US Dairy Markets.”**

- May 24, 2016 Congressional testimony before the United States House of Representatives, House Committee on Agriculture, Subcommittee on Livestock and Foreign Agriculture; Focus on the Farm Economy: A View from the Barnyard, "**US Livestock and Dairy Outlook.**"
- April 26, 2012 Congressional testimony before the United States House of Representatives, House Committee on Agriculture, Subcommittee on Livestock, Dairy and Poultry; "**Analysis of the Dairy Security Act.**"
- September 23, 2010 Testimony before the United States Department of Agriculture, Dairy Industry Advisory Committee; "**Discussion of Federal Dairy Policy.**"
- August 3, 2010 Testimony before the United States Department of Agriculture, Dairy Industry Advisory Committee; "**US Federal Dairy Policy Alternatives.**"
- May 13, 2010 Congressional testimony before the United States House of Representatives, House Committee on Agriculture; "**2012 Farm Bill Issues.**"
- April 13, 2010 Testimony before the United States Department of Agriculture, Dairy Industry Advisory Committee; "**History of Federal Dairy Programs.**"
- July 2004 Report prepared for the United States Senate Committee on Agriculture, Nutrition and Forestry and the United States House Committee on Agriculture; United States Department of Agriculture, Economic Research Service. "**Economic Effects of U.S. Dairy Policy and Alternative Approaches to Milk Pricing.**" Administrative Publication Number 076.

Publications

Aga Dobrowolska and Scott Brown. "The Economic Effects of Avian Influenza on the U.S. Egg Industry." NCR-134 proceedings. April 2016.

"Missouri Beef Priorities and Initiatives" Scott Brown, Joe Horner, Ryan Milhollin and Daniel Madison, <http://beef.missouri.edu/Missouri-Beef-Value-Added-Study-2016.pdf>, March 2016.

"Missouri Dairy Industry Revitalization Study" Joe Horner, Ryan Milhollin and Scott Brown, <http://dairy.missouri.edu/revitalization/>, January 2015.

Capps, Jr., Oral; Gary Willams, Victoria Salin, Scott Brown, "Quantitative Evaluation of the Effectiveness of Marketing and Promotion Activities by the Milk Processor Education Program (MilkPEP), Dairy Management, Inc. (DMI), Research Report to Congress, Agribusiness, Food and Consumer Economics Research Center, Texas A&M University, October 2014

"Management Considerations in Beef Heifer Development and Puberty", Editors David Patterson, Michael Smith (2013)

Wilson, Christine A., Charles B. Moss, D. Scott Brown, "Reporting and usability of ARMS income and balance sheet data", Agricultural Finance Review, Vol 72:2 (2012) 286 - 293.

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In accordance with Rule XI, clause 2(g)(5)*, of the *Rules of the House of Representatives*, witnesses are asked to disclose the following information. Please complete this form electronically by filling in the provided blanks.

Committee: Agriculture

Subcommittee: Livestock and Foreign Agriculture

Hearing Date: April 30, 2019

Hearing Title :

Reviewing the State of the Dairy Economy

Witness Name: Scott Brown

Position/Title: Associate Extension Professor

Witness Type: Governmental Non-governmental

Are you representing yourself or an organization? Self Organization

If you are representing an organization, please list what entity or entities you are representing:

University of Missouri-Columbia

If you are a non-governmental witness, please list any federal grants or contracts (including subgrants or subcontracts) related to the hearing's subject matter that you or the organization(s) you represent at this hearing received in the current calendar year and previous two calendar years. Include the source and amount of each grant or contract. *If necessary, attach additional sheet(s) to provide more information.* House Rules do NOT require disclosure of federal payments to individuals, such as farm program payments or assistance to agricultural producers.

Grant: Cooperative Agreement for Analysis of Agricultural Markets and Policies

Source: USDA/Office of the Chief Economist Amount: \$400,000

Grant: Grant Identification and management of alleles impairing heifer fertility while optimizing genetic gain in Angus cattle Source: USDA/National Institute of Food and Agriculture Amount: \$2,997,040

If you are a non-governmental witness, please list any contracts or payments originating with a foreign government and related to the hearing's subject matter that you or the organization(s) you represent at this hearing received in the current year and previous two calendar years. Include the amount and country of origin of each contract or payment. *If necessary, attach additional sheet(s) to provide more information.*

