

**Response by the National Cotton Council  
to “Are Farmers Made Whole by Trade Aid?”  
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A recent study<sup>1</sup> by researchers at Kansas State University stated that “payment rates are larger than estimated price impacts of retaliatory tariffs for most commodities – the difference is especially large for cotton and sorghum.” According to the authors, the 2019 MFP cotton payment rate was about 33 times larger than the estimated impact from previous studies. The authors also noted that “critics suggest that the way in which this procedure was implemented may have “overcompensated” some crops, such as cotton.”

However, a further look at actual price and trade data confirms that cotton producers have not been overcompensated for the trade damages. The following analysis provides a more detailed explanation, but as demonstrated in the following summary points, the MFP assistance has only partially compensated cotton producers for the loss in market revenue.

- USDA’s methodology of determining trade damage was consistent across all commodities.
- The author’s implication of overcompensation was based on a comparison of USDA’s model with other modeling approaches. In the case of cotton, the other studies acknowledged that their results were preliminary in nature and did not have the benefit of actual trade data.
- Cotton producers did not receive USDA’s estimated trade damage of 26 cents on all bales produced. USDA’s county-level methodology produced a weighted average payment of \$99 across all 2019 cotton acres. With a yield of 805 pounds per acre, the average per-pound compensation for cotton was 12 cents, not 26 cents.
- Between June 2018 and January 2020, the market value of an average acre of cotton fell by \$197. MFP assistance compensated just 50% of that decline.

The authors critique the methodology used by USDA to calculate Market Facilitation Program (MFP) payments and suggest that payments should have been based on price impacts instead of quantity impacts (or gross trade damages). In the detailed 2019 USDA methodology report<sup>2</sup>, USDA defines gross trade damages as the total amount of expected export sales lost to the retaliatory partner due to the additional tariffs. According to the USDA report, “this metric provides one assessment of economic loss, and there are other forms of economic injury that could be measured. Gross trade damage contributes to the economic cost to the producer to adjust to the disrupted markets, manage surplus commodities, and expand and develop new markets, consistent with the design of the MFP. Further, export sale losses provide the most direct link to the retaliatory action(s) and is the single estimate that most comprehensively accounts for the full scale of trade impacts.” It is important to note that USDA applied the same methodology to all commodities when estimating trade damages.

The author’s conclusions that some crops may have been overcompensated are simply based on the comparison of results from different trade models based on varying assumptions and methodologies. Yet, the readers are led to believe that the USDA model is incorrect and inferior to the other models. This is particularly apparent when the authors discuss the 2019 estimated trade damages for cotton. The authors compare the USDA 2019 cotton payment rate to the estimated 1.2 – 1.3% price impacts from two previous studies (Liu and

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<sup>1</sup> Janzen, J.P., and N.P. Hendricks. 2020. “Are Farmers Made Whole by Trade Aid?” *Applied Economic Perspectives and Policy*. Available at: <https://onlinelibrary.wiley.com/doi/epdf/10.1002/aepp.13045>.

<sup>2</sup> USDA Office of the Chief Economist. 2019. Trade Damage Estimation for the Market Facilitation Program and Food Purchase and Distribution Program. USDA, August 22, 2019.

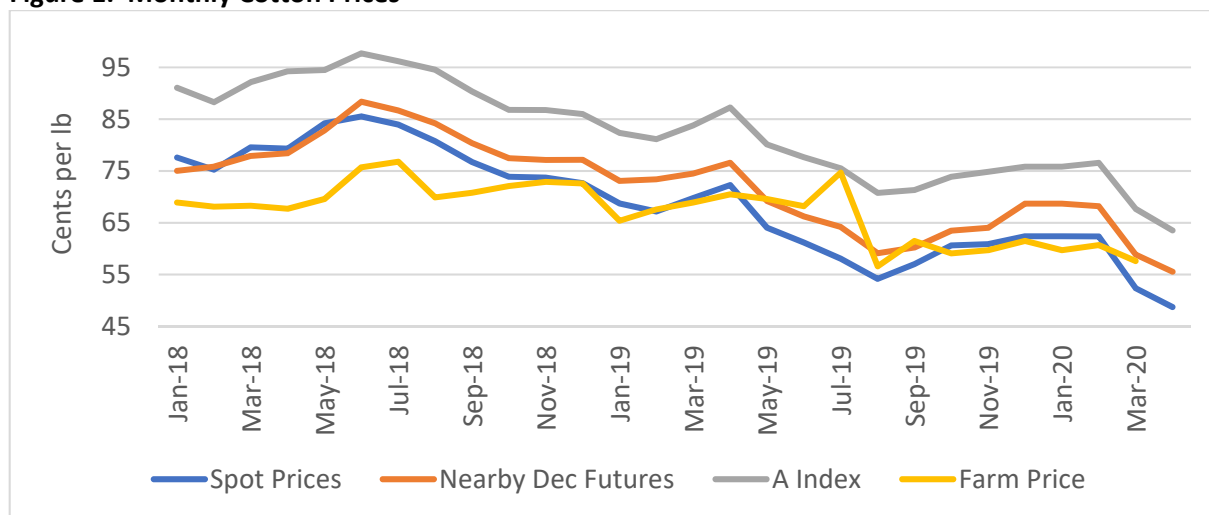
Hudson 2019<sup>3</sup>; Zheng et. al 2018<sup>4</sup>). The study by Zheng et. al (2018) was published in the second quarter of 2018 (prior to the market disruptions from the trade dispute). As stated in the article, the authors “used the GSIM model to predict the impact of China’s retaliatory tariffs on four major agricultural commodities— soybeans, cotton, sorghum, and pork.” The study predicted potential market impacts from the retaliatory tariffs based on model assumptions since actual data was not available when the study was conducted.

The study by Liu and Hudson (2019) was published in early 2019 and the authors clearly state that the results were preliminary. As stated in the paper, “The analysis results presented here represent only a first attempt at understanding the potential economic impacts on global cotton markets in the presence of China’s retaliatory tariff, making use of the new data to provide some preliminary information if the underlying macroeconomic conditions of this study are assumed.” They also state that, “Although this current study attempts to capture and quantify the accurate impacts of the recent trade policy change, it is greatly constrained by the available trade data. The findings will be enhanced as more trade data become accessible. Thus, the model results should be viewed more as a preliminary analysis for understanding the potential aggregate effects rather than trying to produce specific forecasts of annual changes.”

Since actual price and trade data are now available, it would seem more reasonable for the authors to compare actual price and trade impacts to USDA’s estimates.

Since the implementation of the 25% retaliatory tariff on U.S. cotton, prices have sharply declined (Figure 1). Prior to the U.S.-China trade dispute, growers had the opportunity to price cotton off a futures market trading in the range of 80-90 cents. Prior to the additional COVID-19 price impacts, futures prices recovered slightly to the upper 60s following the Phase I trade agreement. Currently, growers are facing futures prices in the mid to upper 50s. Similar declines have been observed in U.S. spot market prices, the “A” index, and the average farm price. As shown in Figure 2, the monthly cotton prices in January 2020 decline by over 20% as compared to June 2018. Prices have continued to decline due to the COVID-19 outbreak.

**Figure 1. Monthly Cotton Prices**



<sup>3</sup> Liu, B., and D. Hudson. 2019. A Preliminary Analysis of the Effects of China's Cotton Tariff on the Chinese and U.S. Cotton Markets. *Estey Centre Journal of International Law and Trade Policy* 20(1): 15– 27.

<sup>4</sup> Zheng, Y., D. Wood, H.H. Wang, and J.P.H. Jones. 2018. Predicting Potential Impacts of China's Retaliatory Tariffs on the U.S. Farm Sector. *Choices* 33(2): 1– 6.

**Figure 2. Percentage Change in Monthly Cotton Prices**

% Change	June 18 to Jan 20	June 18 to Apr 20
Spot Price <sup>5</sup>	-27%	-43%
Nearby Dec Futures <sup>6</sup>	-22%	-37%
"A" Index <sup>7</sup>	-22%	-35%
Farm Price <sup>8</sup>	-21%	NA

U.S. cotton producers continue to feel the impacts of lower prices. For the most recent five years, the U.S. average cotton yield per harvested acre is approximately 850 pounds per acre. Based on spot market prices, the value of an average acre of cotton declined in value by \$197 from June 2018 to January 2020. Under the 2019 Market Facilitation Program, cotton producers received between \$15 and \$150 per acre. The weighted average compensation across all 2019 cotton acres is estimated at \$99 per acre (or \$0.12/lb based on average yields). While every bale of production experienced the loss in market value, producers did not receive USDA's 26-cent trade impact on every bale of production. In fact, the actual compensation of 12 cents was less than one-half of that value and just 50% of the lost market value. While MFP is extremely beneficial for the financial condition of the farm, the current assistance does not fully offset the economic losses.

In addition to the cotton price impacts, the U.S. has lost market share in China as a result of the U.S.-China trade dispute. For more than a decade, China has been a key market for U.S. cotton fiber exports. For the 2018 and 2019 crop years, U.S.-origin cotton has been less competitive relative to growths from countries such as Australia, Brazil and India due to the imposition of the 25% tariff. The current trade dispute with China and the resulting retaliatory tariffs on U.S. cotton and cotton yarn are increasingly harming the U.S. cotton industry and long-term market share in China. The immediate impact has been a decline in market share of China's cotton imports from 45-46% for the 2016 and 2017 crops down to 18% for the 2018 crop, while Brazil's market share increased from 7% in 2017 to 23% in 2018 (Figure 3). Based on the latest available shipment data for the 2019 crop year (August – March), the U.S. market share is currently 17%, while Brazil's market share is 41%. This lost market share has reduced overall export sales and shipments, further depressing U.S. cotton prices.

**Figure 3. Market Share of China's Cotton Imports**

	2016/17	2017/18	2018/19	2019/20 (Aug-March)
United States	46%	45%	18%	17%
Brazil	4%	7%	23%	41%

Following the reduction in Chinese reserve stocks to a manageable level, China was poised to import more U.S. cotton during the 2018 marketing year. China imported 9.6 million bales in 2018 as compared to 5.7 million during the 2017 crop year. If the U.S. had maintained its pre-tariff market share of 45%, China's imports of U.S. cotton would have totaled 4.3 million bales in 2018. Instead, the U.S. exported 1.6 million bales to China during the 2018 crop year.

<sup>5</sup> Spot Price represents cash sales of cotton. Spot prices are reported by the USDA AMS.

<sup>6</sup> Nearby December New York Futures Exchange contract price.

<sup>7</sup> "A" Index is a proxy for the world price of cotton. It is an average of the cheapest five quotations from a selection of the principal upland cottons (currently 19) traded internationally. For a more detailed description visit the Cotlook, Ltd. website.

<sup>8</sup> Farm Price or Average Price Received by Farmers represents the price paid to growers by cotton buyers. Average Price Received is reported by USDA NASS. The April 2020 monthly price has not been published yet.

As Chinese mills have continued to source from other cotton-exporting countries, U.S. cotton has gained some traction in other markets. However, that shifting of trade comes with additional costs and those sales have been secured at lower prices. U.S. merchandisers are facing increased transportation and storage costs as they seek new markets. In addition, financing costs for export sales to key markets such as Bangladesh and Pakistan can be greater than those for sales to Chinese mills. Overall, 2018 U.S. cotton exports were lower than the USDA projections prior to the trade dispute. In the May 2018 WASDE report, the USDA estimate for 2018/19 exports was 15.5 million bales while actual exports only reached 14.8 million bales.

The retaliatory tariffs and the uncertainty facing the textile supply chain have reduced global cotton demand for the 2018 and 2019 crop years. Prior to the U.S.-China trade dispute, USDA was projecting a record level of world mill use near 128 million bales (Figure 4). Since September 2018, USDA has lowered, and continues to lower world mill use projections. For the 2018/19 crop year, world mill use was just over 120 million bales, almost 8 million bales lower than the earlier estimates. As a result of the reduced demand, U.S. cotton merchandizing firms were faced with increased cancellations of sales to international customers during the 2018 marketing year.

Prior to the COVID-19 pandemic, world mill use for the 2019 crop year was estimated to be 121 million bales. The Phase I trade agreement with China was expected to increase purchases of U.S. commodities, including cotton, in the 2020 crop year. However, the timing and quantity of additional Chinese purchases is highly uncertain given the market disruptions created by the COVID-19 outbreak. Following the initial outbreak in China, USDA lowered world mill use projections by 2 million bales in February and March as a result of the ongoing trade dispute, a slowdown in the Chinese and world economies, and disruptions in manufacturing and trade due to the coronavirus outbreak. In response to the global economic disruptions, USDA made the single largest one-month reduction in global mill use for the 2019 crop year with a decline of 7.6 million bales in the April Supply and Demand report. USDA's estimate of 110.6 million bales for the 2019 crop year is 8.1% lower than in 2018. The devastating economic impacts from COVID-19 could result in a further drop in world mill use for the 2019 crop year. For the world balance sheet, the 2019 world mill use estimate ranges from 106 to 110 million bales as essentially all cotton-consuming countries see lower use due to the pandemic. Reduced demand and record stocks outside of China will create additional price pressure for the coming months.

**Figure 4. World Cotton Mill Use**

