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Farm Policy: USDA's 2018 Trade Aid Package

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SUMMARY

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Farm Policy: USDA's 2018 Trade Aid Package

In early 2018, the Trump Administration—citing concerns over national security and unfair trade practices—imposed increased tariffs on certain imported products in general and on U.S. imports from China in particular. Several of the affected foreign trading partners (including China) responded to the U.S. tariffs with their own retaliatory tariffs targeting various U.S. products, especially agricultural commodities.

On July 24, 2018, Secretary of Agriculture Sonny Perdue announced that the U.S. Department of Agriculture (USDA) would be taking several temporary actions to assist farmers in response to trade damage from what the Administration has characterized as "unjustified retaliation." Specifically, the Secretary said that USDA would authorize up to $12 billion in financial assistance—referred to as a trade aid package—for certain agricultural commodities using Section 5 of the Commodity Credit Corporation (CCC) Charter Act (15 U.S.C. 714c). USDA intends for the trade aid package to provide short-term assistance in response to the ongoing trade disputes. However, the Secretary stated that there would not be further trade-related financial assistance beyond this $12 billion package. The aid package includes (1) a Market Facilitation Program (MFP) of direct payments (valued at up to $10 billion) to producers of soybeans, corn, cotton, sorghum, wheat, hogs, and dairy who are most affected by the trade retaliation (sweet cherries and almonds were added to this list in September); (2) a Food Purchase and Distribution Program to partially offset lost export sales of affected commodities ($1.2 billion); and (3) an Agricultural Trade Promotion (ATP) Program to expand foreign markets ($200 million).

USDA's Farm Service Agency will administer the MFP by providing payments in two potential tranches: a first round announced on August 27, 2018, initially valued at $4.7 billion; and an equivalent-valued second round announced on December 17, 2018. However, producers need only sign up once for the MFP to be eligible for first and second payments. The sign-up period for soybeans, corn, cotton, sorghum, wheat, hogs, and dairy started September 4, 2018. The sign-up period for fresh sweet cherries and shelled almonds started on September 24. To be eligible, a producer must have an ownership share in the commodity, be actively engaged in farming, and be in compliance with adjusted gross income restrictions and conservation provisions. Eligible producers should apply after their harvest is complete. Initially, producers were given a deadline of January 15, 2019, to complete an application. However, USDA extended the deadline until February 14, 2019, due to the government shutdown.

USDA will base MFP payments on each farm's 2018 harvested production of eligible crops—including corn, cotton, sorghum, soybeans, wheat, fresh sweet cherries, and shelled almonds—times a fixed per-unit payment rate. Payments to dairy will be based on historical production, while hogs will use mid-year inventory data. It is expected that over three-fourths of the approximately $9 billion in estimated MFP payments will be provided to soybean producers. MFP payments are capped on a per-person or per-legal-entity basis at a combined $125,000 for eligible crop commodities, a combined $125,000 for dairy production and hogs, and, separately, a combined $125,000 for fresh sweet cherries and shelled almonds.

In addition to the MFP payments, the Administration announced a Food Purchase and Distribution Program that is to undertake $1.2 billion in government purchases of excess food supplies. USDA has targeted an initial 29 commodities for purchases and distribution through domestic nutrition assistance programs. Purchasing orders and distribution activities are to be adjusted based on the demand by the recipient food assistance programs geographically. The smallest piece of the trade aid package is an allocation of $200 million to the ATP to boost the trade promotion efforts at USDA's Foreign Agricultural Service, including foreign market development for affected agricultural products. On January 31, 2019, USDA awarded $200 million to 57 organizations through ATP.

USDA's use of its discretionary authority under the CCC Charter Act to make direct payments without further congressional action has historically been episodic and limited in its scale. While the use of this authority is not without precedent, the scope and scale of this trade aid package has increased congressional and public interest. Furthermore, the significant variation in the announced MFP payment rates for affected commodities has elicited questions about equitable treatment among affected commodities. On September 13, USDA released a description of its MFP payment methodology, which is based strictly on the estimated direct trade "damage"—that is, export losses resulting from retaliatory tariffs. Indirect effects—such as the decline in market prices and resultant "lost value" for many of the affected commodities—were not included in the payment calculation.

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Introduction

In early 2018, the Trump Administration—citing concerns over national security and unfair trade practices—imposed increased tariffs on certain imported products in general and on U.S. imports from China in particular.[1] Several of the affected foreign trading partners responded to the U.S. tariffs with their own retaliatory tariffs targeting various U.S. products, especially agricultural commodities.[2]

On July 24, 2018, Secretary of Agriculture Sonny Perdue announced that the U.S. Department of Agriculture (USDA) would be taking several temporary actions to assist farmers in response to trade damage from what the Administration has characterized as "unjustified retaliation."[3] Specifically, USDA would authorize up to $12 billion in financial assistance—referred to as the "trade aid" package—for certain agricultural commodities under Section 5 of the Commodity Credit Corporation (CCC) Charter Act (15 U.S.C. 714c). The Secretary said that most of the funding would go to agricultural commodities most directly affected by the trade retaliation—corn, cotton, soybeans, sorghum, wheat, hogs, and dairy (sweet cherries and almonds were added to this list in September)—but that some funding would also be used for the purchase, distribution, and trade promotion of a variety of affected commodities.

The trade-aid package includes a Market Facilitation Program (MFP) of direct payments to affected producers, a Food Purchase and Distribution Program, and an Agricultural Trade Promotion (ATP) program.[4] Payments under the MFP program would be made in two rounds: a first round announced on August 27, 2018, initially valued at $4.7 billion; and an equivalent-valued second round announced on December 17, 2018.[5] Secretary Perdue stated that there would not be further trade-related financial assistance beyond this $12 billion package as producers would be able to adjust their production activities in 2019 to reflect market conditions related to the trade dispute.

This report provides background on the trade dispute that triggered the trade-aid package as well as the authority used by USDA to respond to the trade dispute with financial assistance. Then the report describes the three components of the trade-aid package with details on their implementation.

Tariffs as the Origin of the Trade Aid Package

On March 8, 2018, President Trump issued two proclamations imposing tariffs on U.S. imports of certain steel and aluminum products, respectively, using presidential powers granted under Section 232 of the Trade Expansion Act of 1962.[6] Section 232 authorizes the President to impose restrictions on certain imports based on an affirmative determination by the Department of Commerce that the targeted import products threaten national security. The proclamations

[1] See CRS Insight IN10943, *Escalating U.S. Tariffs: Timeline*.

[2] CRS Insight IN10880, *China's Retaliatory Tariffs on Selected U.S. Agricultural Products*.

[3] USDA, "USDA Assists Farmers Impacted by Unjustified Retaliation," press release, July 24, 2018.

[4] USDA, "USDA Announces Details of Assistance for Farmers Impacted by Unjustified Retaliation," press release, August 27, 2018.

[5] USDA, "USDA Launches Second Round of Trade Mitigation Payments," press release, December 17, 2018, https://www.usda.gov/media/press-releases/2018/12/17/usda-launches-second-round-trade-mitigation-payments.

[6] For more information on this issue, see CRS Report R45249, *Section 232 Investigations: Overview and Issues for Congress*.

outlined the President's decisions to impose tariffs of 25% on steel and 10% on aluminum imports, with some flexibility on the application of tariffs by country. China, Canada, Mexico, the European Union, and Turkey responded by enacting retaliatory tariffs on U.S. food and agricultural products, in addition to other goods.

In July 2018, the Trump Administration used a Section 301 investigation to impose tariffs of 25% on $34 billion worth of selected imports from China, citing concerns over China's policies on intellectual property, technology, and innovation.[7] In August 2018, the Administration levied a second round of Section 301 tariffs, also of 25%, on an additional $16 billion worth of imports from China. In September 2018, additional tariffs of 10% were applied to $200 billion worth of imports from China, and in May 2019, these were raised to 25%.[8] The imposition of the Section 301 tariffs on Chinese goods resulted in retaliatory tariffs by China.

During 2018, China, Canada, Mexico, the European Union, and Turkey levied retaliatory tariffs on more than a thousand U.S. food and agricultural tariff lines of the Harmonized Tariff Schedule (HTS). With the exception of China, other country actions were in response to U.S. imposition of Section 232 tariffs on steel and aluminum. **Table 1** summarizes retaliatory tariff increases by various U.S. trading partners against U.S. agricultural products in response to U.S. Section 232 and Section 301 tariff hikes.[9] The retaliatory tariffs affected many products imported by the United States including meats, grains, dairy products, specialty and horticultural crops, seafood, and alcoholic beverages. In 2018, U.S. imports of affected products totaled almost $22 billion based on the customs data from these countries. This represents a 27% decline from the $30 billion of U.S. imports for the same goods in 2017. In 2018, China purchased 67% of U.S. exports (by value) affected by retaliatory tariffs compared to a 76% share in 2017. China has also imposed retaliatory tariffs, ranging between 5% and 25%, on U.S. fishery and forestry products.

India had identified certain U.S. pulse crops, apples, and tree nuts for retaliatory tariffs, but these were not implemented in 2018.[10] On May 31, 2019, President Trump announced that India would be removed from the U.S. Generalized System of Preferences (GSP) program. GSP provides duty-free tariff treatment for certain products from designated developing countries.[11] This action is expected to raise duties on about $5 billion to $6 billion worth of goods the U.S. imports from India—or slightly more than 10% of India's total exports of $54 billion to the United States in 2018.[12] In response to U.S. action, India implemented the retaliatory tariffs originally identified in 2018 (but with some changes), effective June 16, 2019.[13]

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[7] Under the Trade Act of 1974, Section 301 allows the U.S. Trade Representative (USTR) to suspend trade concessions or impose restrictions if it determines that a U.S. trading partner is violating trade commitments or engaging in discriminatory or unreasonable practices that burden or restrict U.S. commerce. For more information on this issue, see CRS Insight IN10943, *Escalating U.S. Tariffs: Timeline*.

[8] USTR, "Notice of Modification of Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation," May 9, 2019.

[9] Agricultural and food products considered for the retaliatory tariffs include most of chapters 1 to 24 of the U.S. HTS, which cover meat, grains, animal feed, dairy, horticultural products, processed foods, unprocessed tobacco, seafood, and alcoholic beverages. They also include essential oils in chapter 33; animal hides and skins in chapters 41 and 43; and silk, cotton, and wool in chapters 50, 51, and 52. Fishery products (chapter 3 and parts of chapter 16) are not included in the agricultural data presented in this report.

[10] India, Immediate Notification Under Article 12.5 of the Agreement on Safeguards to the Council for Trade in Goods of Proposed Suspension of Concessions and other Obligations Referred to in Paragraph 2 of Article 8 of the Agreement on Safeguards, May 18, 2018.

[11] D. Palmer, "Trump Ends Trade Benefits for India, Raising Tariffs on Billions in Imports," *Politico*, May 31, 2019.

[12] Palmer, "Trump Ends Trade Benefits for India."

[13] Government of India, *The Gazette of India*, Part II, §3, no. 357, Customs Notification No. 16/2019, June 15, 2019.

Table 1. Comparison of Retaliatory Tariff Hikes on U.S. Agricultural Products: September 2018 versus June 2019

Percentage Increases on Top of World Trade Organization (WTO) Most Favored Nation (MFN) Tariff Rates or Rates Under the North American Free Trade Agreement (NAFTA)

			Tariffs increases as of September 2018			Tariff increases as of June 2019		
Country	**Products**	**Effective**	**Min[a]**	**Max[b]**	**Avg[c]**	**Min[a]**	**Max[b]**	**Avg[c]**
China[d]	Almost all products	First of 5 tranches initiated April 2, 2018.	5%	50%	20%	5%	50%	24%
Canada[e]	Coffee; prepared meats, fruit, vegetables and other products; whiskey	July 1, 2018	10%	10%	10%	0%	0%	0%
Mexico[e]	Pork; cheese; apples; prepared fruits and vegetables; whiskey	June 5, 2018	7%	25%	18%	0%	0%	0%
European Union	Prepared vegetables and legumes; grains; fruit juice; peanut butter; whiskey	June 22, 2018	10%	25%	24%	10%	25%	24%
Turkey[f]	Tree nuts; rice; miscellaneous prepared foods; whiskey; tobacco	June 21, 2018	20%	140%	58%	10%	70%	29%
India[g]	Almonds; walnuts; apples; chickpeas; lentils	June 16, 2019	0%	0%	0%	10%	29%	18.5%

Sources: USDA, Foreign Agricultural Service, various GAIN reports: CH18034, June 21, 2018; CH18034, August 6, 2018; CH19030, May 17, 2019; E18045, June 21, 2018; TR8018, June 28, 2018; TR9012, May 22, 2019; MX8028, June 6, 2018; and IN8108, September 21, 2018; *Gazette of India*, Customs Notification No. 16/2019, June 15, 2019; Department of Finance, Canada, "Notice of Intent to Impose Countermeasures Action Against the United States in Response to Tariffs on Canadian Steel And Aluminum Products," May 31, 2018; Toubia et al., "Canada and Mexico Eliminate Section 232 Steel/Aluminum Countermeasures as of May 20," *International Trade Law*, May 20, 2019.

Notes: MFN tariff rates are the tariff rates that WTO members levy on imports from other WTO members, excluding those with whom a preferential trade agreement may exist. Canada and Mexico have signed NAFTA with the United States and levy tariff rates lower than the MFN rates—zero on almost all U.S. imports.

Products include most of chapters 1-24 of the U.S. Harmonized Tariff Schedule, which cover meat, grains, animal feed, dairy, horticultural products, processed foods, unprocessed tobacco, alcoholic beverages; plus essential oils in chapter 33; animal hides and skins in chapters 41 and 43; and silk, cotton, and wool in chapters 50, 51, and 52. Fishery products (chapter 3 and parts of chapter 16) and forest products are not considered in the table.

a. Min = minimum retaliatory tariff levied by the country on the listed products.

b. Max = Maximum retaliatory tariff levied by the country on the listed products.

c. Avg = Simple average (unweighted) tariff rates for the listed products. Within a category of traded products, trade may mostly occur for a few products' harmonized tariff lines rather than being evenly divided across all lines. Weighted averages are therefore considered as the "effective" average tariff rates.

d. China imposed the first set of retaliatory tariffs (in response to 232 tariffs) in April 2018, followed by the first round in response to 301 tariffs in July 2018, then successive rounds in August 2018, September 2018, and finally in June 2019.

e. Canada and Mexico removed their retaliatory tariffs effective May 20, 2019, and have in effect the zero NAFTA tariffs.

f. Turkey halved the retaliatory tariffs on U.S. imports on May 21, 2019, in response to U.S. action that reduced tariffs on Turkish steel imports.

g. India proposed retaliatory tariffs in June 2018 but is implementing them effective June 16, 2019.

China, which is subject to the largest set of U.S. tariff increases—including both the U.S. 232 steel and aluminum tariffs and the U.S. 301 tariffs in response to unfair trade practices—also has

the most expansive list of retaliatory tariffs. China was the second-leading export market by value for U.S. agricultural goods in calendar year (CY) 2017. However, China's retaliatory tariffs apply to almost all U.S. agricultural exports. As a result, China experienced a 53% decline in agricultural imports from the United States between 2017 and 2018, from $19.5 billion to $9.2 billion.[14] For the past decade China was the top export market for U.S. soybeans, but among China's retaliatory tariffs is a 25% tariff on U.S. soybeans. In 2017, China imported about $12 billion worth of U.S. soybeans, accounting for 57% of the value of U.S. soybean exports that year. With the higher tariffs in place, China is now purchasing more soybeans from Brazil and elsewhere to meet its demand,[15] and the value of U.S. soybeans exports to China in 2018 fell to $3 billion. China has also targeted other key U.S. products, including sorghum, wheat, pork and pork offal, dairy products, fruits and nuts, seafood, and whiskey.

On May 17, 2019, the Trump Administration announced an agreement with Canada and Mexico to remove the Section 232 tariffs for steel and aluminum imports from those countries and to remove all retaliatory tariffs imposed on American goods.[16] Canada and Mexico removed the retaliatory tariffs effective May 20, 2019. Similarly, the Administration reduced tariffs on Turkish steel imports, and Turkey responded by halving the retaliatory tariffs on U.S. imports on May 21, 2019.[17]

U.S. agriculture and food products have been targeted with increased tariffs by foreign nations for several reasons. First, the United States is the largest exporter of agriculture and food products, so many countries have the choice of retaliating against those goods. Second, agricultural commodities are often more easily substituted from among potential suppliers, so curbing imports from one country would not necessarily limit an importing country's access to the commodity. For example, China has turned primarily to Brazil for more of its soybean imports. Third, given the geographic nature of the production of some agriculture and food products, countries can target certain goods in order to negatively and disproportionately affect the constituents of specific U.S. lawmakers. For example, all of the retaliating countries have imposed retaliatory tariffs on whiskey, some specifically on Bourbon whiskey, which is largely produced in Kentucky, rather than on all distilled beverages or alcohol more generally.[18]

Trade Aid Package Authority

The primary authority for the trade aid package is the Secretary of Agriculture's discretion to use the general powers of the CCC. The CCC is a wholly government-owned entity that exists solely to finance authorized programs that support U.S. agriculture. It is federally chartered by the CCC Charter Act of 1948 (P.L. 80-806; 15 U.S.C. 714 *et seq.*), as amended. Most CCC-funded programs are classified as mandatory spending programs and therefore do not require annual discretionary appropriations in order to operate.[19] The CCC instead borrows from the U.S. Treasury to finance its programs consistent with its permanent, indefinite authority to borrow up

[14] U.S. Census Bureau trade data, accessed June 5, 2019, https://apps.fas.usda.gov/gats/default.aspx.

[15] Karl Plume, "U.S. Soybean Exports Scrapped as China Shifts to Brazilian Beans," Reuters, May 18, 2018.

[16] USTR, "United States Announces Deal with Canada and Mexico to Lift Retaliatory Tariffs," press release, May 17, 2019.

[17] USDA, Foreign Agricultural Service, "Turkey Reduces Additional Levies on U.S. Products," GAIN Report Number: TR9012, May 22, 2019.

[18] Amanda Macias, "America's Booming Bourbon Business Caught in the Crosshairs of Trump's Trade War," *CNBC*, June 17, 2018.

[19] CRS In Focus IF10783, *Farm Bill Primer: Budget Issues*.

to $30 billion. Congress replenishes the CCC borrowing authority by appropriating funding to cover the CCC's net realized losses.[20]

Typically, Congress passes laws, such as omnibus farm bills, that specifically direct USDA on how to administer CCC activities and in what amounts to fund them. The underlying authorization for the CCC, however, also provides the Secretary with general powers to take certain actions in support of U.S. agriculture at the discretion of the Secretary. This discretionary use has historically been somewhat intermittent and limited in its scale, but it is the basis of all three components—MFP, the Food Purchase and Distribution program, and ATP—of the trade aid package announced by the Administration.[21]

Trade Aid Package Implementation

On August 27, 2018, Secretary Perdue announced the first round of trade assistance. As part of the August 27 announcement, Secretary Perdue provided details on each of the three trade aid package components, including an initial tranche of $6.1 billion in designated outlays out of a potential $12 billion in total program spending. The MFP was to provide initial estimated direct payments of $4.7 billion to qualifying agricultural producers. On December 17, 2018, Secretary Perdue revised the first round of MFP outlays upward slightly to $4.8 billion, and announced an equivalent $4.8 billion in potential second-round outlays. In addition to the MFP, a Food Purchase and Distribution Program was to undertake $1.2 billion in government purchases of excess food supplies. The ATP program, funded with an additional $200 million, was to help finance foreign market development for affected agricultural products.

Market Facilitation Program

The MFP[22] provides direct financial assistance to producers of certain commodities that are significantly impacted by actions of foreign governments resulting in the loss of traditional exports. USDA initially determined that qualifying commodities include corn, upland cotton, extra-long-staple cotton, sorghum, soybeans, wheat, dairy, and hogs. On September 21, 2018, USDA announced that fresh sweet cherries and shelled almonds are also eligible for MFP payments. MFP payments will be based on 2018 harvested production of the eligible commodities.

USDA's Farm Service Agency (FSA) is to administer the MFP by providing payments in two potential tranches.[23] However, producers need only sign up once for the MFP to be eligible for first and second payments.[24] Under the sign-up period, producers could submit MFP applications beginning on the following dates: September 4, 2018, for producers of soybeans, sorghum, corn, wheat, cotton, dairy, and hogs; and September 24, 2018, for producers of shelled almonds and

[20] For more detailed information on the CCC, see CRS Report R44606, *The Commodity Credit Corporation: In Brief*; or CRS Insight IN10941, *Commodity Credit Corporation: Q&A*.

[21] USDA also has discretionary authority to purchase U.S. agricultural commodities under a provision known as Section 32—the name refers to its authorization in Section 32 of the act of August 24, 1935 (P.L. 74-320; 7 U.S.C. §612c), as amended. No Section 32 funds were used to finance food purchases under the trade aid package.

[22] The Market Facilitation Program moniker—used to describe the direct payment portion of the trade aid package—is newly created by USDA and does not represent an existing program. See CCC, "Market Facilitation Program," 83 *Federal Register* 44173, August 30, 2018.

[23] USDA, FSA, "Market Facilitation Program (MFP)," Fact Sheet, September 2018.

[24] USDA, "USDA Launches Second Round of Trade Mitigation Payments."

fresh sweet cherries. Eligible producers should apply after their harvest is complete. Initially, producers were given a deadline of January 15, 2019, to complete an application. However, USDA extended the deadline to February 14 due to a partial shutdown of the federal government.[25] Producers must also certify their 2018 production as part of the MFP eligibility process. The final deadline for producers to certify their 2018 production was May 17, 2019.[26]

Actual MFP payments will be based on 2018 harvested production. Based on USDA's reported 2018 production data, MFP payments could be as much as a projected $9.8 billion, with over three-fourths ($7.5 billion) of MFP payments provided to soybean producers.[27] Final MFP payment data has yet to be released; however, through May 20, 2019, about $8.5 billion in payments had been made (**Table 2**).

Who Qualifies for a Payment?

U.S. producers of corn, cotton, sorghum, soybeans, wheat, dairy, hogs, fresh sweet cherries, and shelled almonds are eligible for MFP payments under the 2018-announced program. Eligible applicants must

- have an ownership interest in the commodity[28] and be actively engaged;[29]
- have an average adjusted gross income (AGI) for tax years 2013, 2014, and 2015 of less than $900,000 per year or an AGI in excess of $900,000 but where at least 75% of AGI is derived from farming, ranching, or forestry-related activities;[30]
- comply with the provisions of the "Highly Erodible Land and Wetland Conservation" regulations, often called the conservation compliance provisions.[31]

USDA Determination of MFP Per-Unit Payment Rates

USDA determined MFP payments based on its estimated "direct trade damage"—that is, the difference in expected trade value for each affected commodity with and without the retaliatory tariffs (**Table A-3**).[32] The estimated "trade damage" for each affected commodity was then divided by the crop's production in 2017 to derive a per-unit payment rate. Indirect effects—such

[25] USDA Office of Communication, press release, January 8, 2019. FSA offices were closed starting on December 28, 2018, due to a lack of funding, thus preventing farmers from applying for the program or certifying their 2018 production. In the January 8 press release, USDA stated that the deadline for application would be extended by the number of business days that FSA offices are closed as a result of the shutdown.

[26] According to the USDA's FSA (MFP Handbook, MFP-2, p. 8), a producer must self-certify his/her 2018 production on USDA form CCC-910, Part C, to be eligible for MFP payments. Initially producers were given a deadline of May 1, 2019, to certify their 2018 production. However, on April 29, 2019, USDA extended the deadline for certification to May 17, 2019.

[27] See calculations presented in **Table 2**.

[28] With respect to cotton, ownership applies only to cotton harvested as lint. For corn, sorghum, and wheat, ownership applies only to the portion harvested as grain. For milk, ownership applies only to dairy operations in business as of June 1, 2018, and ownership of hogs is as of August 1, 2018, but excludes hogs produced under contract.

[29] See CRS Report R44656, *USDA's Actively Engaged in Farming (AEF) Requirement*.

[30] For other 2018 USDA program payments, the AGI criteria is based on the tax years of 2014, 2015, and 2016 (see CRS Report R44739, *U.S. Farm Program Eligibility and Payment Limits*). However, AGI criteria for MFP payments was adjusted to reflect an earlier period by the FY2019 Supplemental Appropriations for Disaster Relief Act (P.L. 116-20, §103; June 3, 2019).

[31] See CRS Report R42459, *Conservation Compliance and U.S. Farm Policy*.

[32] USDA, "USDA Releases Details Trade Damage Estimate Calculations," press release, September 13, 2018; and USDA, Office of the Chief Economist, "Trade Damage Estimation for the Market Facilitation Program and Food Purchase and Distribution Program," white paper on trade loss methodology, September 13, 2018.

as any decline in market prices and resultant "lost value" for many of the affected commodities—are not included in the payment calculation (see **Appendix B**).

USDA's trade-aid package thus links MFP commodity payments only to the trade loss associated with each identified MFP commodity. Neither final trade effect, with or without retaliatory tariffs, is observable because much of the affected agricultural production had yet to be harvested and sold at the time the payment rates were calculated, and markets had yet to fully adjust to whatever new trade patterns would emerge from the trade dispute. As a result, USDA estimated both export values (with and without retaliatory tariffs) using a global trade model that took into account the availability of substitute supplies from export competitors, and the availability of demand for U.S. agricultural exports from alternate importers.

How Will Farm-Level MFP Payments Be Determined?

MFP payments are tied directly to a producer's actual level of production of eligible commodities in 2018. A producer's total potential MFP payment for an eligible commodity equals the announced payment rate per unit (see column two of **Table 2**) times the harvested (and certified) production during 2018 or in the case of hogs, the inventory during the period of July 15 to August 15, 2018. During the first payment period (announced by USDA on September 27), MFP payments were set equal to the announced MFP payment rate times 50% of a producer's harvested (and certified) production. The second payment rate (announced on December 17) applied to the remaining 50% of the producer's production.

The MFP is separate from and in addition to the current safety net support provided by the Agricultural Risk Coverage (ARC) and Price Loss Coverage (PLC) support programs[33] or crop insurance coverage that protects against low prices, low yields, or a combination of both.[34] Furthermore, by coupling the payments directly to production,[35] those regions of the country where drought or other yield-reducing factors have negatively impacted production during 2018 may receive less aid through MFP than other regions. According to USDA, as of May 20, 2019, $8.5 billion in payments have been made to farmers.[36]

MFP Payment Limit

USDA announced that MFP payments are capped on a per-person or per-legal-entity basis under three separate payment limits: a combined $125,000 for eligible crops (corn, cotton, sorghum, soybeans, and wheat), a combined $125,000 for livestock (dairy production and hogs), and a combined $125,000 for eligible specialty crops (fresh sweet cherries and shelled almonds). Furthermore, MFP payments do not count against other 2014 farm bill payment limitations. There are no criteria in place to calculate whether MFP might duplicate losses covered under revenue support programs (e.g., ARC and PLC) of the 2014 farm bill. As a result, the same program acres that are eligible for ARC or PLC payments may be eligible for MFP payments.

[33] CRS In Focus IF10711, *Farm Bill Primer: ARC and PLC Support Programs*.

[34] See CRS In Focus IF10638, *Farm Bill Primer: The Farm Safety Net*; and CRS Report R45193, *Federal Crop Insurance: Program Overview for the 115th Congress*.

[35] CRS Report R43817, *2014 Farm Bill Provisions and WTO Compliance*.

[36] USDA, FSA, MFP payment data as of May 20, 2019.

Table 2. MFP: Eligible Commodities, Payment Rates, Production Base, and Payments

Commodity[a]	Per-Unit Rate ($)[b]	Unit	Production Base[c]	Projected Payments Based on NASS Data[d]	Payments as of May 20, 2019 ($ Million)[e]
Soybeans	1.65	bushel	Harvested crop in 2018	$7,497.4	$7,043.8
Hogs	8.00	head	Inventory during July 15 to August 15, 2018[f]	$580.6	$155.2
Cotton[g]	0.06	pound	Harvested crop in 2018	$529.6	$475.0
Sorghum	0.86	bushel	Harvested crop in 2018	$313.9	$242.4
Dairy (milk)	0.12	cwt.[h]	Historical MPP-Dairy production[i]	$241.5	$180.2
Wheat	0.14	bushel	Harvested crop in 2018	$263.8	$238.4
Corn	0.01	bushel	Harvested crop in 2018	$144.2	$132.0
Fresh sweet cherries	0.16	pound	Harvested crop in 2018[j]	$111.7	$37.1
Shelled almonds	0.03	pound	Harvested crop in 2018[k]	$73.5	$12.4
Total				**$9,756.2**	**$8,518.5**

Sources: USDA, "USDA Launches Second Round of Trade Mitigation Payments," press release, December 17, 2018; USDA, "USDA Announces Details of Assistance for Farmers Impacted by Unjustified Retaliation," press release, August 27, 2018; USDA, "Market Facilitation Program (MFP)," September 2018; USDA, Notice of Funds Available, Market Facilitation Program (MFP), August 27, 2018, and "USDA Adds Shelled Almonds and Fresh Sweet Cherry to Market Facilitation Program," press release, September 21, 2018.

Notes:

a. Crops that are grazed in the field or used as forage are not eligible for MFP payments.

b. The per-unit payment rate is based on the USDA-determined trade damage.

c. A crop producer requesting an MFP payment must have a crop acreage report (Form FSA-578) on file with USDA. Producers who do not have an acreage report would follow the "late-filed" acreage report process.

d. Crop production data for 2018 are from NASS, 2018 Annual Crop Production, January 2019. Other 2018 production or inventory estimates include hog inventory estimated at 72.6 million head; historical dairy production estimated at 2,012.6 million cwt.; fresh sweet cherry production estimated at 697.8 million lbs.; and shelled almond production estimated at 2,450 million lbs. These latter estimates may change as better data become available.

e. USDA, FSA payment data as of May 20, 2019, for all commodities except fresh sweet cherries and shelled almonds, whose payment data is as of May 13, 2019.

f. Payment for hog operations is based on the total number of live hogs during the July 15 to August 15, 2018, period that correctly reflects the farm's operations. Production records for hogs may include, but are not limited to, breeding records, inventory records, sales receipts, rendering receipts, or veterinary records.

g. Both upland cotton and extra-long-staple cotton are eligible for MFP payments.

h. cwt. = hundred pounds or hundredweight.

i. The payment for dairy production is based on the historical production reported for the Margin Protection Program for Dairy under the 2014 farm bill (P.L. 113-79). For existing dairy operations, the production history is established using the highest annual milk production marketed during the full calendar years of 2011, 2012, and 2013. Dairy operations are also required to have been in operation on June 1, 2018.

j. Sweet cherries intended for process market or juice are not eligible for MFP. The quantity of production for sweet cherries is on a "pack-out" basis.

k. Shelled almonds will be based on the total eligible kernels or such similar term as edible meat weight.

WTO Compliance of Trade Retaliation Assistance Payments

Due to its potential price tag ($12 billion) and the coupled nature of the MFP payments, there is considerable interest from policymakers and market observers about whether these payments will be fully compliant with World Trade Organization (WTO) commitments.[37] It would appear that, if the United States restricts MFP payments to $12 billion or less, and its other amber box payments adhere to the recent annual average of $4.9 billion since 2010, then total U.S. amber box payments would be below its $19.1 billion limit on trade-distorting farm subsidies at the WTO.[38] However, several economists have suggested there is considerable uncertainty in how much the eventual MFP payments will be. For example, Darci Vetter, former chief U.S. agricultural negotiator at the Office of the U.S. Trade Representative, said that current low agricultural commodity prices cause her to worry that billions of dollars in "additional payments will put us over our [amber box] $19 billion cap," exposing the United States to a potential legal challenge.[39] Joe Glauber, a former USDA chief economist, stated, "I would be very hesitant to say categorically, 'No, we're not going to hit our $19.1 [billion ceiling].'"

Industry Response to MFP Payment Allocation

While soybean growers and most farm-advocacy groups have generally been supportive of the payments, some commodity groups—most notably associations representing corn, wheat, and milk—contend that the MFP payments are insufficient to fully compensate their industries (see **Table A-4** and **Appendix B** for a comparison of "trade loss" and "market loss").[40] The National Corn Growers Association claims that recent trade disputes have lowered corn prices by $0.44/bu. for a loss of $6.3 billion on the projected 2018 harvest. Similarly, the National Association of Wheat Growers estimates that a $0.75/bu. price decrease will result in nearly $2.5 billion in lost value, while the National Milk Producers Federation calculates that milk prices are now estimated to be $1.10/cwt. lower than just prior to the trade retaliation, causing over $1.2 billion in losses based on milk futures prices.

Many specialty crop groups similarly contend that their interests are not being fully compensated for tariff-related export losses by the USDA trade aid programs. For example, a recent study suggests that, in California alone, specialty crops may suffer trade-related losses of over $3.3 billion this year.[41]

Food Purchase and Distribution Program

The Administration is allocating about $1.2 billion of its trade aid package to purchasing various agricultural commodities and distributing them through domestic nutrition assistance programs. The premise is that removing products from normal marketing channels helps to reduce supply and thereby increase prices and farm income.

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[37] See CRS Report R45305, *Agriculture in the WTO: Rules and Limits on U.S. Domestic Support*, by Randy Schnepf.

[38] See CRS In Focus IF10192, *WTO Disciplines of Domestic Support for Agriculture*.

[39] Doug Palmer, "Trump's Trade Aid Plan Could Breach WTO Farm Subsidy Limit," *Politico*, August 9, 2018.

[40] *The Hagstrom Report*, "Summary of Trump Trade Aid: It's Not Enough," vol. 8, no. 201 (August 28, 2018); and *Politico*, "Trump Offers Trade Aid to Farmers, but Some Question Its Fairness," August 28, 2018. See also Y. Zhou et al., "Dispatches from the Trade Wars," *farmdoc daily*, August 29, 2018.

[41] Daniel A. Sumner and Tristan M. Hanon, "Economic Impacts of Increased Tariffs That Have Reduced Import Access for U.S. Fruit and Tree Nuts Exports to Important Markets," University of California, August 1, 2018.

USDA typically purchases agricultural commodities for domestic distribution in two ways: (1) "entitlement purchases" for the mandated, preplanned needs of a feeding program; and (2) "contingency purchases" (also called "bonus buys") that are usually triggered as a surplus removal mechanism to raise market prices of a commodity without displacing normal demand.

The new $1.2 billion of purchases is under the second category of contingency purchases. Contingency purchases are statutorily authorized under the Secretary's discretion to support agriculture by making purchases under the CCC or Section 32.[42] These are mandatory funds and do not need to be appropriated.

When USDA purchases commodities, especially for distribution to nutrition assistance programs, the Agricultural Marketing Service (AMS) announces its purchasing intentions with product specifications. Vendors who are approved to sell to USDA may submit offers.[43] The purchased products would be distributed through regular USDA nutrition assistance channels that provide in-kind assistance, such as food banks participating in the Emergency Food Assistance Program, the Commodity Supplemental Food Program, child nutrition programs such as the National School Lunch Program, and the Food Distribution Program on Indian Reservations.[44] However, not all of these programs have the authority to accept contingency/bonus purchases.

The Administration's August 27 announcement listed 29 commodities targeted for purchases totaling $1.2 billion (**Table A-1**).[45] In addition, purchases of two additional commodities (sweet cherries and almonds) were expected to total $175 million (**Table A-2**).[46] The announced purchase values were set for each affected commodity using the same gross trade damage formula that was used to calculate the MFP per-unit payment rate described earlier.[47]

The largest purchases that were announced include pork ($559 million), sweet cherries ($111.5 million), apples ($93 million), dairy ($85 million), and pistachios ($85 million). USDA said that the breadth of commodities and scale of purchases was based on economic analyses of the effect of tariffs. Purchasing orders and distribution activities are to be adjusted based on the demand by the recipient food assistance programs geographically. As of December 17, 2018, USDA had procured some portion of 16 of the 29 commodities included in the program, totaling more than 4,500 truckloads of food. USDA's AMS will continue purchasing commodities for delivery throughout 2019.[48]

In FY2017, the AMS purchased $2.2 billion of commodities for distribution for domestic nutrition assistance.[49] Of this total, $735 million was from Section 32 ($270 million in contingency purchases that are most similar to those under the trade aid package and $465 million in entitlement purchases), and $1.5 billion was entitlement purchases from the USDA's Food and

[42] See CRS Insight IN10941, *Commodity Credit Corporation: Q&A*; and CRS Report RL34081, *Farm and Food Support Under USDA's Section 32 Program*.

[43] See AMS, "How the Process Works," https://www.ams.usda.gov/selling-food/how-process-works.

[44] CRS Report R42353, *Domestic Food Assistance: Summary of Programs*.

[45] USDA's announced purchase values were set at the level of gross trade damage to each affected commodity using the same global trade model as used for calculating the MFP per-unit payments.

[46] USDA, "USDA Announces Details of Assistance for Farmers Impacted by Unjustified Retaliation," press release, August 27, 2018.

[47] USDA, Office of the Chief Economist, "Trade Damage Estimation for the Market Facilitation Program and Food Purchase and Distribution Program," white paper on trade loss methodology, September 13, 2018.

[48] USDA, "USDA Launches Second Round of Trade Mitigation Payments."

[49] USDA, *FY2019 Budget Explanatory Notes for Committee on Appropriations*, "Agricultural Marketing Service," p. 92, and "Commodity Credit Corporation," p. 21.

Nutrition Service budget. No purchases were made with CCC funds. Thus, the new program of contingency purchases is several times larger than a typical annual amount and a relatively large increase in the amount distributed through nutrition programs.

Agricultural Trade Promotion Program

The third and smallest element of the trade aid package is the ATP program.[50] The Administration is allocating $200 million of the trade aid package to boost trade promotion efforts of USDA's Foreign Agricultural Service (FAS). The program is to operate in a manner similar to FAS's Market Access Program (MAP) and Foreign Market Development Program (FMDP). These funds are to provide cost-share assistance to eligible U.S. agricultural organizations to promote U.S. food and agricultural goods overseas and develop new markets to help offset the adverse effects of the retaliatory tariffs.[51] The money—which would nearly double the amounts made available annually for the MAP and FMDP trade promotion programs—can be used for such activities as consumer advertising, public relations, point-of-sale demonstrations, participation in trade fairs and exhibits, market research, and technical assistance. Further, ATP money is not limited to certain commodities and is to be available to all sectors of agriculture (**Table A-5**).

While the $200 million for ATP is considerably less than the other programs in the trade aid package, it is a notable increase for USDA's trade promotion programs, which are authorized at $234 million annually. The application period for ATP closed in November 2018 with more than $600 million in requested activities from more than 70 organizations. On January 31, 2019, USDA's FAS announced the full $200 million in ATP funding awards.[52] The full list of ATP funding recipients are provided in **Table A-5**.

Conclusion

The broad discretionary authority granted to the Secretary under the CCC Charter Act to implement the trade aid package also allows the Secretary to determine how the aid is to be calculated and distributed. Using this authority is not without precedent, but the scope and scale of its use for the trade aid package has increased congressional and public interest. USDA has declared this trade aid package to be a temporary, one-time response to foreign tariffs imposed on selected U.S. commodities. However, on May 23, 2019, Secretary Perdue announced that he would again be taking several actions in 2019 to assist farmers in response to continued economic damage from trade retaliation and trade disruption in international agricultural markets. These actions are to include a new trade aid package for the U.S. farm sector valued at up to $16 billion.

Most farm commodity and advocacy groups have been supportive of the trade aid package even as they have called for solutions that restore export activity. However, some stakeholders have begun to question the equity of the distribution of MFP payments due to difficulties in isolating specific market effects and the initial lack of transparency around the formulas for determining MFP payment rates. Now that the formulas are public, several commodity groups question the

[50] CCC, "Agricultural Trade Promotion Program," 83 *Federal Register* 44178, August 30, 2018.

[51] MAP and FMDP are currently authorized at $234 million annually. See CRS Report R44985, *USDA Export Market Development and Export Credit Programs: Selected Issues*.

[52] USDA, "USDA Awards Agricultural Trade Promotion Program Funding," press release, January 31, 2019, https://www.usda.gov/media/press-releases/2019/01/31/usda-awards-agricultural-trade-promotion-program-funding. The list of ATP recipients is available at https://www.fas.usda.gov/atp-funding-allocations.

rationale for determining MFP payments based on "trade damage" rather than the broader "market loss" measure.

Some trade economists and market watchers have suggested that the potential effects of the trade aid package and the imposition of tariffs and retaliatory tariffs could be longer lasting because they have created uncertainty about U.S. trade policy behavior and have called into question U.S. reliability as a trading partner.[53] Further, the use of CCC authority to mitigate tariff-related losses may establish a precedent for future situations.

[53] Mario Parker, Isis Almeida, and Alix Steel, "Cargill CEO Sees Risk to U.S. Farmers as China Shuns Soybeans," *Bloomberg News*, September 25, 2018, https://www.bloomberg.com/news/articles/2018-09-25/cargill-ceo-sees-long-term-risk-to-farmers-in-u-s-china-spat.

Appendix A. Food Purchases in the Trade Aid Package

Table A-1. USDA Trade Aid Package Food Purchases

Commodity	Target Amount ($1,000s)
Pork	$558,800
Apples	$93,400
Pistachios	$85,200
Dairy	$84,900
Oranges	$55,600
Grapes	$48,200
Rice	$48,100
Potatoes	$44,500
Walnuts	$34,600
Cranberries	$32,800
Orange Juice	$24,000
Plums/Prunes	$18,700
Navy Beans	$18,000
Pecans	$16,000
Beef	$14,800
Kidney Beans	$14,200
Peanut Butter	$12,300
Peas	$11,800
Macadamia	$7,700
Lemons/Limes	$3,400
Sweet Corn	$2,400
Hazelnuts	$2,100
Lentils	$1,800
Blueberries	$1,700
Strawberries	$1,500
Pears	$1,400
Grapefruit	$700
Apricots	$200
Figs	$15
Total	**$1,238,815**

Source: USDA, "USDA Announces Details of Assistance for Farmers Impacted by Unjustified Retaliation," press release, August 27, 2018.

Table A-2. USDA Trade Aid Package Food Purchases, Details to Be Determined

Commodity	Target Amount ($1,000s)
Almonds	$63,300
Sweet Cherries	$111,500
Total	**$174,800**

Source: USDA, "USDA Announces Details of Assistance for Farmers Impacted by Unjustified Retaliation," press release, August 27, 2018.

Table A-3. Trade-Affected Share of Production for Affected Commodities

Commodity	Unit	2017 Production	2017 Exports Facing Retaliation	Share (%)
Soybeans	Million bu.	4,392.0	1,166.0	27%
Hogs	Million head	25,598.0	3,705.6	14%
Cotton	Million lbs.	10,042.8	1,175.8	12%
Sorghum	Million bu.	364.0	181.4	50%
Dairy (milk)	Million cwt.	2,155.0	46.3	2%
Wheat	Million bu.	1,741.0	55.6	3%
Corn	Million bu.	4,604.0	58.9	0%
Fresh sweet cherries	Million lbs.	875.1	NA	NA
Shelled almonds	Million lbs.	2,270.0	NA	NA

Source: USDA, "Cost Benefit Analysis—Market Facilitation Program," July 24, 2018.

Notes: NA = Not available. Data for the year 2017 is most current data available at time of publication of source.

Table A-4. Comparison of USDA Commodity Price Forecasts

(May to September, 2018)

		2018 Farm Price Forecast[a]		Difference	
Commodity	Unit	May	September	Value	% Change
Soybeans	$/bushel	10.50	8.60	-1.90	-18.1%
Hogs	$/cwt.	44.50	40.50	-4.00	-9.0%
Sorghum	$/bushel	3.60	3.30	-0.30	-8.3%
Corn	$/bushel	3.80	3.50	-0.30	-7.9%
Wheat	$/bushel.	5.00	5.10	+0.10	+2.0%
Dairy (milk)	$/cwt.	16.75	17.25	+0.50	+3.0%
Cotton	$/lb.	0.65	0.75	+0.10	+15.4%

Source: USDA, World Agricultural Supply and Demand Estimates (WASDE), reports for May 10, 2018, and September 12, 2018.

Note:

a. Midpoint of USDA price forecast; marketing year 2018/2019 for crops and calendar 2019 for hogs and milk.

Table A-5. Agricultural Trade Promotion Funding Allocations

Participant	Funding
Alaska Seafood Marketing Institute	$5,497,860
Almond Board of California	$3,185,690
American Hardwood, Plywood, Softwood, and SFPA	$4,977,165
American Peanut Council	$1,922,015
American Pistachio Growers	$1,715,000
American Seed Trade Association	$1,375,000
American Soybean Association	$21,882,165
Blue Diamond Growers	$3,715,000
Brewers Association	$678,640
California Agricultural Export Council	$176,215
California Cherry Marketing and Research Board	$394,440
California Fresh Fruit Association	$267,565
California Olive Committee	$103,135
California Pear Advisory Board	$140,690
California Prune Board	$1,122,195
California Strawberry Commission	$577,140
California Table Grape Commission	$2,856,830
California Walnut Commission	$1,612,440
Cal-Pure Produce	$1,715,000
Cotton Council International	$9,174,190
Cranberry Marketing Committee	$1,139,450
Distilled Spirits Council of the United States	$815,000
Florida Department of Citrus	$550,000
Food Export Association of the Midwest USA	$13,859,825
Food Export USA Northeast	$13,890,275
Ginseng Board of Wisconsin	$526,390
Intertribal Agriculture Council	$272,640
National Association of State Departments of Agriculture	$249,295
National Confectioners Association	$698,940
National Potato Promotion Board	$3,670,860
National Renderers Association	$546,690
National Watermelon Promotion Board	$50,000
New York Wine and Grape Foundation	$371,000
Northwest Wine Promotion Coalition	$2,165,000
Organic Trade Association	$547,085
Pear Bureau Northwest	$564,170

Participant	Funding
Pet Food Institute	$30,000
Raisin Administrative Committee	$990,245
Southern United States Trade Association	$12,592,090
Sunkist Growers	$546,690
Popcorn Board	$150,000
U.S. Apple Export Council	$196,515
U.S. Dairy Export Council	$5,288,194
U.S. Dry Bean Council	$1,465,265
U.S. Grains Council	$13,944,690
U.S. Hide, Skin and Leather Association	$1,375,000
U.S. Highbush Blueberry Council	$259,953
U.S. Meat Export Federation	$17,556,680
U.S. Pecan Growers Council	$1,325,010
U.S. Wheat Associates	$8,249,315
USA Dry Pea and Lentil Council	$1,513,985
USA Poultry and Egg Export Council	$1,361,735
USA Rice Federation/US Rice Producers Association	$3,770,725
Washington Apple Commission	$8,457,600
Washington State Fruit Commission	$709,203
Western United States Agricultural Trade Association	$7,422,920
Wine Institute	$9,789,190
Grand Total:	**$200,000,000**

Source: U.S. Department of Agriculture, Foreign Agricultural Service.

Appendix B. Trade Loss versus Opportunity Cost

USDA has elected to base MFP payments strictly on estimated trade loss. In contrast, several commodity groups have calculated the "lost market value" and view it as a better measure of the economic damage from the retaliatory tariffs (see "Industry Response to MFP Payment Allocation"). These two "loss" measures are described here.

Trade Loss

Trade loss is the value of lost export sales due to a change in foreign demand (**Table A-3**). With respect to retaliatory tariffs, it is the difference in U.S. agricultural exports with and without the tariffs. It also appears in USDA export forecasts. For example, in May 2018, USDA forecast U.S. agricultural export sales to China for FY2018 of $21.6 billion; by August 2018, USDA had revised its forecast down to $19 billion and initially projected agricultural export sales to China in FY2019 of only $12 billion. Thus, from May to August the U.S. agricultural export outlook to China had declined by $2 billion, while the FY2019 forecast had fallen by as much as $9 billion.

Lost Market Value (or the Opportunity Cost of Missed Sales)

Lost market value describes the opportunity cost of missed sales associated with a drop in market prices. For example, if soybean prices were $10.00 per bushel in March and $8.00 per bushel in October, the opportunity cost of not selling in March (whether from on-farm stocks or by forward contracting the crop in the field) but instead waiting to sell after harvest in October would be $2.00 per bushel. All physical quantities of a commodity available on the farm—including commodities in storage as well as in the field—are potentially subject to a missed sales opportunity. Furthermore, until the producer actually sells the commodity, the realized market value and true opportunity cost remain unknown.

In addition, market participants other than farmers would likely suffer market losses or what may be better described as losses in asset values. For example, if prior to the trade dispute an ethanol plant had purchased large stocks of corn to process into ethanol, the value of that corn would have declined with the drop in market prices. So too for any livestock feeding operation that had purchased feedstuffs or for a grain merchant or wholesaler that had made purchases at the previous higher prices. Under USDA's MFP program methodology, only producers of the eligible commodities would get a payment. Thus, many participants along the supply chain that were harmed by the tariff dispute will go uncompensated.

What Is the Correct Cost?

If a trade dispute contributes to a drop in the market price of a commodity, then the associated "lost market value" would affect all quantities of the affected commodity, whether exported or used domestically. This appears to be the type of "loss" being measured by most U.S. commodity groups. However, the retaliatory tariffs are only one of a number of factors that influence market prices. In particular, the outlook for record U.S. soybean and near-record corn harvests in 2018 has likely had an important effect on pressuring market prices lower during the May to September period. This production effect should be excluded from any estimate of trade-based market loss.

Changes in USDA's monthly price forecasts from May to September may provide an upper-bound estimate of the trade impacts (**Table A-4**), since this period coincides with the escalating trade conflicts when the retaliatory tariffs were applied. However, they include the production effect and thus likely overstate any trade impact. According to USDA, during the May-September period, farm prices for MFP commodities declined 18% for soybeans, 8% for sorghum, and 8%

for corn but rose 2% for wheat and 15% for cotton. At first glance, these price changes seem out of sync with the MFP payment rates. Sorghum could receive a payment rate that is nearly three times as large as its estimated price decline from May to September. In contrast, corn—which has experienced a price decline identical to sorghum—could receive a payment rate that amounts to 3% of the price decline that corn prices experienced over this same period.[54]

However, given the number of factors influencing market prices over this period, it may not be possible to establish with confidence what market prices would have been in the absence of the retaliatory tariffs. Any viable estimate would have to be generated from a global economic model featuring all major agricultural commodities that compete for land and other inputs in production; may substitute for each other in alternative uses; and captures the interactions of all relevant market factors such as policy, technology, and expected prices, production, and demand. For example, wheat and cotton are to receive per-unit MFP payment rates while experiencing an increase in farm prices during the May-September period. However, 2018 has been a year of poor international wheat harvests,[55] and it could be that wheat prices might have moved to much higher levels in the absence of retaliatory tariffs.

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[54] G. Schnitkey et al., "Market Facilitation Program: Impacts and Initial Analysis," *farmdoc daily*, August 28, 2018.

[55] Stephanie Bryant-Erdmann, "Weather Continues to Affect Global Wheat Production," U.S. Wheat Associates, September 19, 2018, https://www.uswheat.org/wheatletter/exportable-wheat-supplies-in-the-world-expected-to-fall-for-second-year-in-a-row/.