

USDA Report to House and Senate Committees on Appropriations and Agriculture

October 31, 2019

Overview

Section 119 of P.L. 116-59 requires the Secretary of Agriculture to submit a report, no later than October 31, 2019, to the Committees on Appropriations and Agriculture of both Houses of Congress that includes the following data and information:

- Estimates of all Market Facilitation Program (MFP) payments in calendar year 2018 and 2019 on a State-by-State, commodity-by-commodity (including specialty crops) basis;
- Projected MFP payments in calendar 2020 resulting from the calendar year 2019 program on a State-by-State, commodity-by-commodity (including specialty crops) basis;
- Analysis of the trade damage caused by retaliatory tariffs and separately by non-tariff trade barriers, including dumping, on U.S. agricultural producers; and
- An accounting of any commodity purchases made from substantially foreign-owned companies or their subsidiaries.

This report includes 3 sections that include the requested data and information:

1. Analysis of the trade damage caused by retaliatory tariffs and caused by non-tariff trade barriers, including dumping, on U.S. agricultural producers.
2. Estimates of MFP payments as of Friday, October 18, 2019.
3. Commodity purchases made from substantially foreign-owned companies or their subsidiaries

In addition, several appendices are included: (1) USDA Trade Damage Methodology Report for 2018; (2) USDA Trade Damage Methodology Report for 2019; (3) Estimated 2018 MFP payments; and (4) Estimated 2019 MFP payments.

SECTION 1: TRADE DAMAGES

Part A: Trade damages caused by retaliatory tariffs

In 2018, USDA developed an estimate of gross trade damages for U.S. commodities affected by retaliatory tariffs to establish commodity payment rates for the Market Facilitation Program (MFP) and purchase targets for the Food Purchase and Distribution Program (FPDP). On September 13, 2018, USDA provided a detailed accounting of how those gross damage estimates were calculated using the Global Simulation Analysis of Industry-Level Trade Policy trade model (see Appendix 1).

Therefore, USDA defined economic losses due to the trade actions in terms of gross trade damages. Gross trade damages were defined as the total amount of expected export sales lost to the retaliatory partner due to the additional tariffs. 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.

For 2019, USDA employed the same methodology to estimate gross trade damages, using the same trade model documented in 2018 (see Appendix 2). That model simulates the expected reduction in U.S. exports to the retaliatory partner market. Gross trade damages are calculated as the difference in bilateral trade with the tariff and the baseline (without the tariff). The gross trade damage estimate was the basis for developing the 2019 MFP payment rates (see details in Appendix 2) as well as FPDP purchase targets.

The MFP payments are designed to aid producers in the disposition of surplus commodities; to aid in the expansion of domestic markets; or to aid in the development of new and additional markets and uses. Those programs are intended for crops or commodities that are negatively impacted by trade actions of foreign governments. Specifically, the MFP payments may provide producers with an opportunity to adjust to delays in the marketing of their crops and to costs associated with reorienting their sales to new and additional markets.

For the 2018 trade mitigation programs, USDA employed 2017 trade data as the base year for projecting trade damages. 2017 was used as the 2018 programs' base year because it was the most recent full year of trade data available and reflected trade levels prior to the imposition of retaliatory tariffs starting in April 2018 for some agricultural products.

For the 2019 trade mitigation programs, USDA employed a longer time series to estimate gross trade damages, by surveying trends in U.S. bilateral trade over a 10-year period (2009-2018). For some of the commodities affected by tariffs, 2017 was not the most representative base year on which to conduct the trade damage analysis. The 10-year period for determining a basis for the evaluating the tariffs allows estimates to account for other contributing variables, such as longstanding trade barriers imposed by China and other countries that have affected U.S. exports, as well as the longer-term impact of prolonged retaliatory tariffs.

USDA included 2018 in this time-series, given that for some commodities, new market access had only just begun prior to the implementation of retaliatory tariffs. For example, in mid-2017, China and the United States agreed to improve market access for U.S. beef exports to China. U.S. beef exports began to increase in late 2017 through the first half of 2018 before declining and leveling-off. U.S. beef had been banned from China since 2003, and prior to that ban, the United States was the country's largest beef supplier. Therefore, it is reasonable to expect that, but for the retaliatory tariffs that China imposed on U.S. beef in July 2018, U.S. beef exports to China would have continued to increase at a similar (if not higher) level as observed in the first half of 2018. Using 2017 as a base year does not fully capture the new market access opportunities for U.S. beef.

The trade impacts from retaliatory tariffs are reflected in USDA's outlook for U.S. agricultural trade in 2019 and 2020.¹ As of August 29, USDA forecasts fiscal year (FY) 2019 exports at \$134.5 billion, down \$8.9 billion from FY 2018 and \$17.8 billion lower than FY 2014. FY 2019 exports of soybeans are forecast to fall \$5.3 billion from 2018, as sales to other markets do not make up for the trade damage caused by China's retaliatory tariffs. Other major commodity groups are projected to decline in FY 2019: grains and feeds (-\$1.2 billion), livestock, poultry, and dairy (-\$700 million), and cotton (-\$900 million). U.S. agricultural exports to China in FY 2019 are forecast at \$7.3 billion, down \$9 billion from FY 2018 and over 70 percent lower than FY 2014's record \$25.7 billion.

While total U.S. agricultural exports in FY 2020 are projected to reach \$137 billion, up \$2.5 billion from the FY 2019 forecast, it would still be the fourth lowest export level during the past decade. FY 2020 exports to China are projected at \$7.5 billion, only slightly higher than the FY 2019 forecast and the second lowest export level since FY 2007.

Part B: Trade damages caused by non-tariff trade barriers

U.S. agriculture has faced numerous non-tariff trade barriers (NTBs) in overseas markets, such as sanitary and phytosanitary (SPS) measures not based on sound science, discretionary import licensing and administration of tariff-rate quotas (TRQs), and burdensome technical standards such as labeling or other certification requirements. Moreover, U.S. agricultural products have become increasingly subject to anti-dumping and countervailing duty investigations that have led to the imposition of dumping and/or countervailing duties that have put U.S. agricultural exports at a competitive disadvantage. This section provides additional detail on and analysis of NTBs and other foreign trade practices that have affected U.S. agriculture.² While not exhaustive, the NTBs discussed are illustrative and allow for an *ex post* analysis of possible trade impacts resulting from these measures.

The Office of the United States Trade Representative (USTR) and other U.S. Government agencies, including the U.S. Department of Agriculture, publish a number of regular reports that identify significant barriers to U.S. exports of agricultural products. USTR annually produces the National Trade Estimate (NTE) Report and the Trade Policy Agenda and Annual Report, both of which provide an expansive survey of foreign trade barriers. The NTE Report also provides, where practicable, quantitative estimates of these foreign practices. USTR also prepares annual reports on the Implementation and Enforcement of Russia's World Trade Organization (WTO) Commitments (the Russia WTO report) and the USTR Report to Congress on China's WTO Compliance, both of which are submitted to Congress as required by U.S. law.

USDA also produces numerous reports and studies that identify and in some cases provide quantitative estimates of NTBs on U.S. agriculture. For example, the overseas offices of the Foreign Agricultural Service (FAS) publish Global Agricultural Information Network (GAIN) reports that provide detailed information on foreign trade barriers affecting U.S. agriculture. FAS also submits an annual report on U.S. Specialty Crop Trade Issues to Congress, and in 2016, FAS submitted a report on Policy Barriers to U.S. Grain Producers. The Economic Research Service (ERS) has a long history of publishing peer-reviewed research on U.S. agricultural trade and the impacts of NTBs on U.S. exports. The Office of the

¹ Outlook for U.S. Agricultural Trade, AES-109, August 29, 2019. The forecasts in this report are based on policies in effect at the time of the August 12 *WASDE* release. See

<https://www.ers.usda.gov/webdocs/publications/94837/aes-109.pdf?v=4424.3>.

² To be clear, the USDA trade damage estimates do not measure the trade effect of measures other than the retaliatory tariffs imposed by China and other trading partners. However, as discussed in the 2019 methodology report, USDA established the base year for the 2019 trade damage estimates using a broader time horizon (10 years) to take into account the multi-year impacts other trade policies have had on U.S. agricultural exports.

Chief Economist (OCE) has produced a number of studies on NTBs and economic impacts for U.S. agriculture, in partnership with several leading U.S. academicians who specialize in agriculture and trade.

Broadly defined, NTBs are policy measures other than ordinary customs tariffs that impede international trade in goods, changing quantities traded, prices, or both. This would include quotas, licensing requirements, sanitary and phytosanitary measures, technical barriers, and other non-technical measures. While rules and regulations can facilitate and enhance trade by increasing consumers' confidence, they can also deliberately or unintentionally restrict trade. Unlike tariffs, the cost of NTBs are not directly quantifiable or transparent. The economic assessment of NTBs typically requires rigorous quantitative methods to indirectly estimate the costs of such barriers.

A wide range of academic studies have conducted impact assessment of NTBs. General research efforts have examined the overall impact of NTMs by attempting to estimate the broadest possible scope of all globally reported measures.^{3,4,5} Other studies have examined a wide set of agri-food sectors including fruits, nuts, cereals oilseeds and meat.^{6,7,8,9} generating extensive empirical evidence that NTBs exist as significant barriers to trade. Santeramo and Lamonaca (2019) provides a recent and comprehensive review of such studies.¹⁰ Cadot et al. (2015)¹¹ and Grant and Arita (2017)¹² suggest that SPS/TBT measures likely account for the largest component of NTB costs in agri-food sectors. For example, Arita et al. (2015)¹³ find significant negative effects of SPS regulations maintained by the European Union (EU) for certain agricultural sectors. Grant et al. (2015)¹⁴ find negative effects of SPS measures on U.S. fresh fruit and vegetable exports. Tao et al. (2016)¹⁵ estimated the restrictiveness of SPS measures in

³See Ferrantino, M. (2006). Quantifying the trade and economic effects of non-tariff measures, *OECD Trade Policy Working Paper No. 28*; Kee, H. L., A. Nicita, and M. Olarreaga. (2009). Estimating Trade Restrictiveness Indices." *The Economic Journal*, 119(January): 172-199.

⁴See Disdier, A., L. Fontagné, and M. Mimouni. (2008). The Impact of Regulations on Agricultural Trade: Evidence from the SPS and TBT Agreements. *American Journal of Agricultural Economics* 90(2): 336-350.

⁵ See Gourdon, J., and A. Nicita. (2012). "Non-Tariff Measures: Evidence from Recent Data Collection," *In Non-Tariff Measures—A Fresh Look at Trade Policy's New Frontier*, ed. O. Cadot and M. Malouche. London/Washington, DC: Centre for Economic Policy Research/World Bank.

⁶ See Otsuki, T., J.S. Wilson, and M. Sewadeh. (2001). "Saving Two in a Billion: Quantifying the Trade Effect of European Food Safety Standards on African Exports," *Food Policy*, 26: 495-514.

⁷ See Wilson, J. S., Otsuki, T. and Majumdar, B. (2003). "Balancing Food Safety and Risk: Do Drug Residue Limits Affect International Trade in Beef?" *Journal of International Trade and Economic Development*, 12(4): 377-402.

⁸See Jayasinghe, S., J. Beghin and G. Moschini. (2009). "Determinants of World Demand for U.S. corn Seeds: The Role of Trade Costs," *American Journal of Agricultural Economics*, 92(4): 999- 1010.

⁹ Drogué, S. and DeMaria, F. (2012). "Pesticides residues and trade: the apple of discord?" *Food Policy*, 37(6): 641-649.

¹⁰ Santeramo, F. G., & Lamonaca, E. (2019). The Effects of Non-tariff Measures on Agri-food Trade: A Review and Meta-analysis of Empirical Evidence. *Journal of Agricultural Economics*, 70(3), 595-617.

¹¹ Cadot, O., Asprilla, A., Gourdon, J., Knebel, C., & Peters, R. (2015). Deep regional integration and non-tariff measures: A methodology for data analysis. *UNCTAD Policy Issues in International Trade and Commodities Research Study Series*, No. 69. New York, Geneva: United Nations.

¹² Grant, J., & Arita, S. (2017). Sanitary and phyto-sanitary measures: Assessment, measurement, and impact. *IATRC Commissioned Paper*, No. 938-2017-1828.

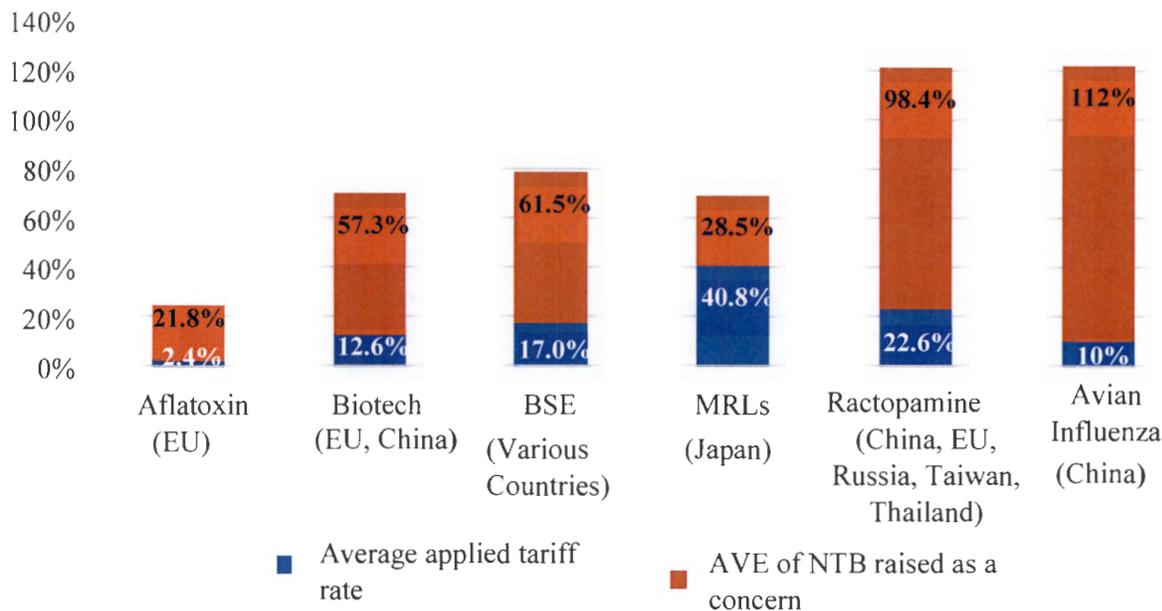
¹³ Arita, S. L. Mitchell, and J. Beckman. (2015). Estimating the Effects of Selected Sanitary and Phytosanitary Measures and Technical Barriers to Trade on U.S.-EU Agricultural Trade. U.S. Department of Agriculture, Economic Research Service, *Economic Research Report* 199.

¹⁴ Grant, J.H., E. Peterson, and R. Ramniceanu. (2015). Assessing the Impact of SPS Regulations on U.S. Fresh Fruit and Vegetable Exports. *Journal of Agricultural and Resource Economics*, 40(1): 144-163.

¹⁵ Tao, H., Luckstead, J., Zhao, L., & Xie, C. (2016). Estimating Restrictiveness of SPS Measures for China's Dairy Imports. *International Food and Agribusiness Management Review*, 19(1030-2016-83116), 101-124.

China finding these measures to be the largest barriers inhibiting imports. Xiong and Beghin (2017)¹⁶ find that the U.S. exports are severely affected by strict maximum residue limits imposed by their partners. Most recently, Ning and Grant (2019)¹⁷ estimated the ad-valorem equivalent effect (AVE) effects of SPS measures raised as concerns at the WTO. The AVE effect of an NTB is the tariff rate that would result in the same trade impact. The study found that many SPS NTBs carry significantly higher trade costs than the current tariffs. For example, ractopamine restrictions imposed on U.S. pork products were equivalent to a 98.4% tariff, compared to average MFN tariffs of 22.6%, Bovine spongiform encephalopathy (BSE) restrictions carries an AVE of 61.5% vs 17.0% MFN tariff (figure 1).

Figure 1. Estimated ad-valorem (AVE) effects of selected NTBs



Source: Ning and Grant, 2019.

China NTBs and trade remedies affecting U.S. agricultural exports

China has long imposed several layers of distortionary policies that have impaired market access for U.S. agricultural exports.¹⁸ Nearly all U.S. agricultural products face some form of NTBs in China’s market, such as problematic SPS measures, arbitrary licensing and certification requirements, and procedures for administering TRQs to control import levels for grains and cotton. Moreover, several commodities (poultry, sorghum, and DDGS) have been subject to unjustified anti-dumping (AD) and countervailing duty (CVD) investigations that led to substantial AD/CVD rates for these products. China has also ramped up the use of distortionary subsidies that have incentivized crop production.

¹⁶ Xiong, B., & Beghin, J. C. (2017). Stringent maximum residue limits, protectionism, and competitiveness: The cases of the US and Canada. In *Nontariff Measures and International Trade* (pp. 193-207).

¹⁷ Ning and Grant, (2019). New Estimates of the Ad-Valorem Equivalent of SPS Measures: Evidence for Selected Case-Studies and Specific Trade Concerns. *Center for Agricultural Trade Research Report, Virginia Tech.*

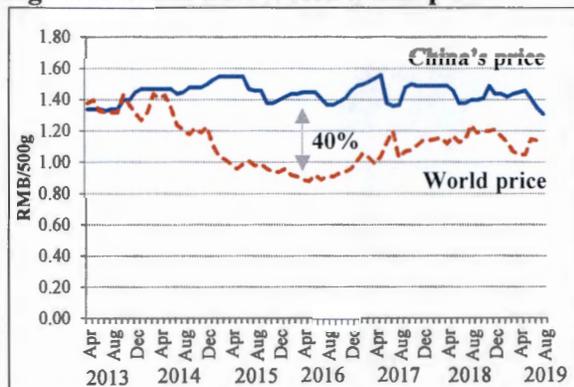
¹⁸ See the USTR 2019 National Trade Estimates Report for more details:

https://ustr.gov/sites/default/files/2019_National_Trade_Estimate_Report.pdf

Corn, Wheat, and Rice

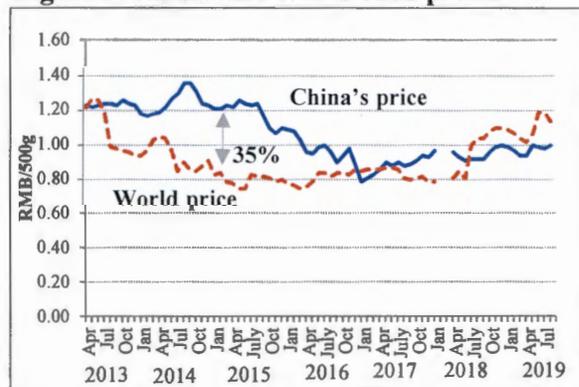
U.S. grain exports to China have long been negatively impacted by a broad range of distortive measures. For example, since the mid-2000s, China substantially increased domestic support to farmers, primarily through market price support measures, to incentivize production of a number of crops, including rice, wheat, and corn.¹⁹ Those measures had the effect of substantially increasing China's production and stocks, and raising internal prices well above world levels (figures 2, 3, and 4). Despite the substantial price difference between domestic and imported products, China's tariff-rate quotas (TRQs) had very low fill rates during 2014-2016 for wheat and corn (figures 5, 6, and 7).²⁰ The United States brought two separate WTO legal challenges against China's domestic support and TRQ administration for corn, wheat, and rice, and prevailed in both cases in 2019.²¹ China did not appeal these rulings. The reasonable period of time (RPT) to implement the Dispute Settlement Body's (DSB) recommendations and rulings in the domestic support case will expire on March 31, 2020; and for the TRQ administration case, the RPT will expire on December 31, 2019.

Figure 2. China and World wheat prices



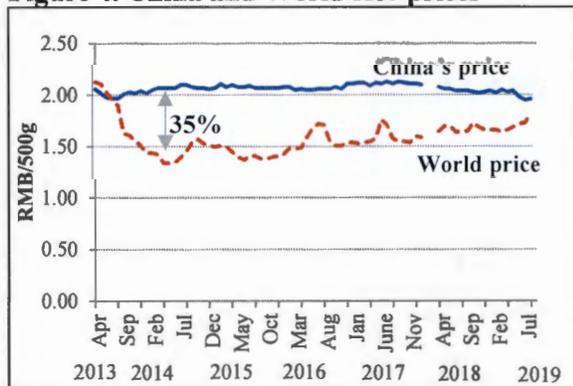
Source: Gale (2017).

Figure 3. China and World corn prices



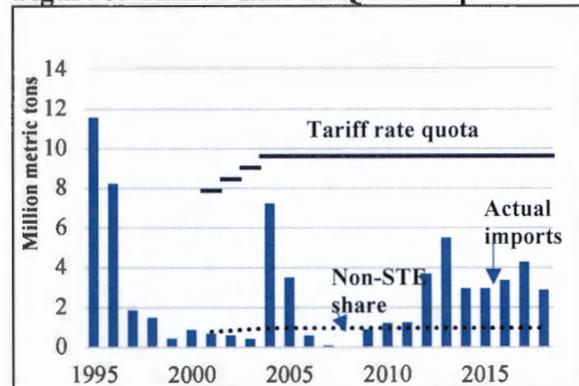
Source: Gale (2017).

Figure 4. China and World rice prices



Source: Gale (2017).

Figure 5. China wheat TRQ and imports



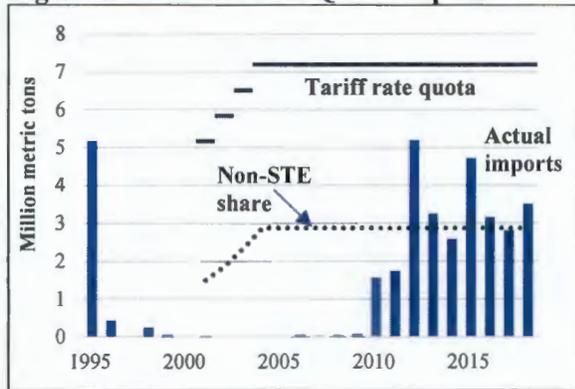
Source: Gale (2017).

¹⁹ See Gale, F. (2017). U.S. Challenge of China's Tariff Rate Quota (TRQ) Administration System for Grains. *Selected paper prepared for presentation at the International Agricultural Trade Research Consortium Meeting*, December 2017.

²⁰ *Ibid*

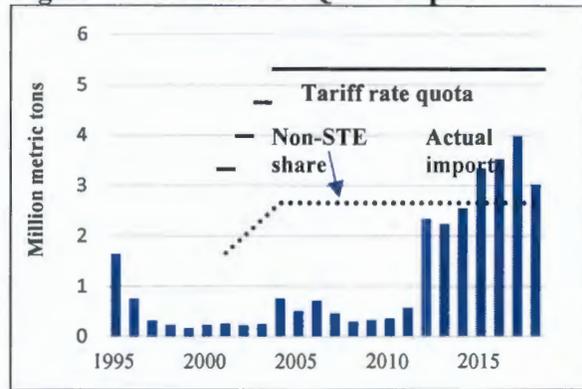
²¹ See <https://ustr.gov/issue-areas/enforcement/dispute-settlement-proceedings/wto-dispute-settlement/pending-wto-dispute-36> and <https://ustr.gov/issue-areas/enforcement/dispute-settlement-proceedings/wto-dispute-settlement/pending-wto-disput29> for more background on the measures covered under these disputes, including how China administers TRQs for wheat, rice, and corn imports.

Figure 6. China corn TRQ and imports



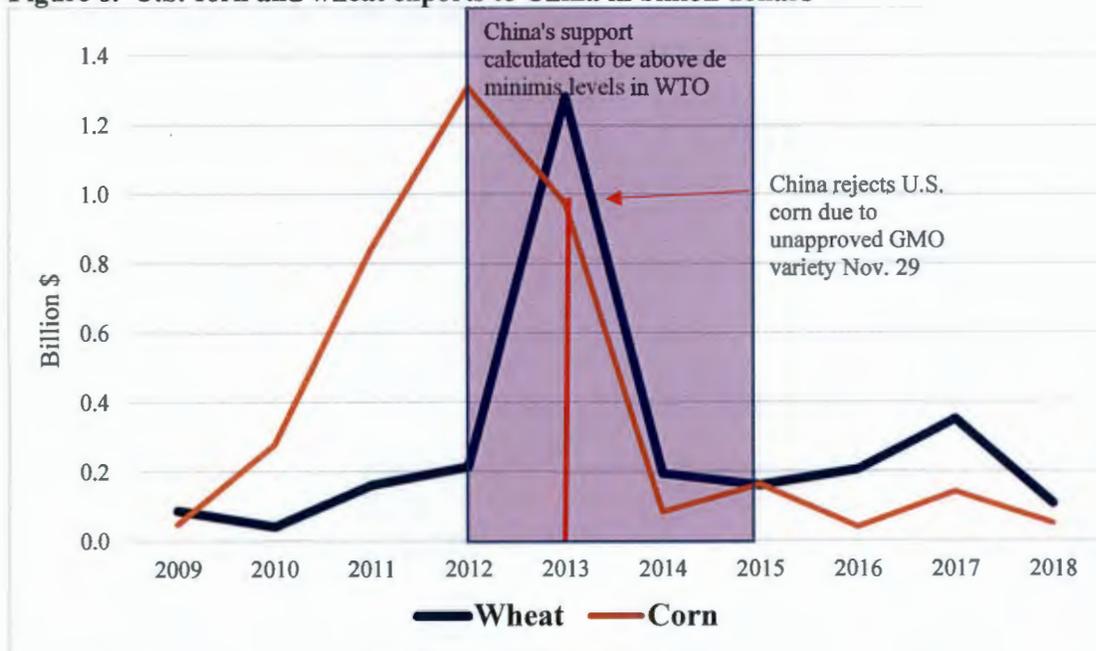
Source: Gale (2017).

Figure 7. China rice TRQ and imports



Source: Gale 2017.

Figure 8. U.S. corn and wheat exports to China in billion dollars



Source: U.S. Census.

Several studies have found that China's imports of U.S. grain products in recent years were likely to have been much higher but for these distortionary policies. Carriquiry et al. (2016) estimate that if China had removed its price supports and input subsidies, China's total wheat imports would reach 9.6 million metric tons (the quota limit).²² Simulating the removal of TRQ administration restrictions, Chen et al. (2018) finds that China's imports of grains would have been 38 percent higher.²³ Separately Xie et al. (2019) found that quotas operated under the State Trading Enterprise (STE) share were particularly

²² Carriquiry, M., A. Elobeid, and D. Hayes. (2016). Analyzing the Impact of Chinese Wheat Support Policies on U.S. and Global Wheat Production, Trade and Prices. Unpublished report.

²³ Chen, B., N. B. Villoria, and T. Xia. (2018). Import Protections in China's Grain Market: An Empirical Assessment. *Selected paper 2018 Agricultural & Applied Economics Association*.

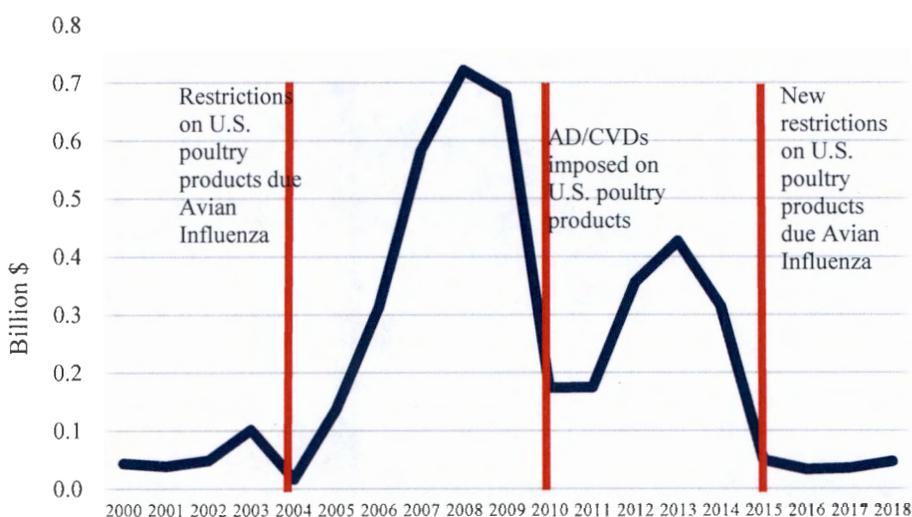
underutilized compared to quotas operated under the non-STE share.²⁴ In addition to providing excessive domestic support and using TRQ administration to inhibit imports, China has also used other non-tariff measures affecting import inspection, such as in late 2013, when China began rejecting of corn shipments due to unapproved genetically modified traits (figure 8).²⁵

Poultry

Poultry provides an example of how U.S. products are impacted by multiple distortionary policy actions by China. Since the early 2000’s, China was a growing U.S. market for poultry reaching over \$400 million (figure 9). In February 2004, China imposed temporary import restrictions on U.S. poultry products in response to an outbreak of highly pathogenic avian influenza (HPAI) outbreak in Texas.²⁶ China lifted the import ban in October 2004 and U.S. exports resumed in 2005, and increased from \$138 million to \$722 million in 2008. In August 2009, the Chinese broiler industry petitioned the Chinese government for an AD/CVD investigation of U.S. poultry, which the Chinese government initiated the following month.

In 2010, final antidumping duties ranging from 50 to 105 percent and countervailing duties ranging from 4 to 30 percent were levied on U.S. poultry exports, which fell 80 percent to \$174 million in 2010. The United States successfully challenged China’s imposition of antidumping and countervailing duties, which China removed in February 2018.²⁷ However, while China continued to import U.S. poultry even with the antidumping and countervailing duties in place, China implemented a nation-wide ban on all U.S. poultry in January 2015 in response to localized HPAI detections. Despite the fact that the last confirmed HPAI findings in the United States were in 2017, and there have not been any subsequent findings, China maintains this ban on U.S. poultry.

Figure 9. U.S. poultry exports to China in billion dollars



Source: U.S. Census.

²⁴ Xie, C. J. Grant, J. Zhu, and X. Li. (2019). Towards a More efficient Tariff Rate Quota Regime: Evidence from Chinese Firm-Level Grain Imports.” *Selected poster Agricultural & Applied Economics Association*.

²⁵ See Shuping, N. and K. Plume. Reuters. (2013, Nov 19). China rejects U.S. corn cargo due to unapproved GMO variety –trade. *Reuters*. Retrieved from <https://www.reuters.com/article/china-corn-gmo/update-3-china-rejects-us-corn-cargo-due-to-unapproved-gmo-variety-trade-idUSL2N0J31QG20131119>

²⁶ See Bean, C. and Z. Jianping. (2004). China, Peoples Republic of Poultry and Products Semi-Annual. *USDA FAS GAIN report*.

²⁷ https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds427_e.htm

Dried Distillers Grains with Solubles (DDGS) and Sorghum

In addition to poultry, China has also undertaken AD/CVD investigations on U.S. DDGS and sorghum. Beginning in 2009, U.S. DDGS exports to China expanded as a source of animal feed, in large part due to China's high internal prices for corn caused by price supports and restrictive TRQ administration, which led Chinese producers to seek alternative feedstuffs such as DDGS and sorghum. In late 2010, China began an AD investigation of U.S. DDGS, which led to a significant drop in U.S. exports until the investigation was terminated.²⁸ In 2013/14, increased inspections of U.S. corn for an unapproved biotech variety led to rejections of both corn and DDGS shipments.²⁹ In 2016, the Chinese government accepted a petition to begin a new AD/CVD investigation. In September 2016, China imposed preliminary antidumping duties of 33.8 percent and countervailing duties of 10 percent. Final antidumping duties were announced in January 2017 at 42.2-53.7 percent and 11.2-12 percent for final countervailing duties.³⁰ According to academic estimates, the duties had the effect of decreasing DDG prices 5.8 percent-7.4 percent.³¹ Since the imposition of those duties, U.S. DDGS exports have fallen below \$50 million (figure 10).

Figure 10. U.S. DDGS exports to China in billion dollars



Source: U.S. Census.

Similar to DDGS, U.S. sorghum exports to China had grown significantly from 2013 to 2015 due to high internal prices for feed in China. In 2016, U.S. sorghum exports were tempered as corn prices in China fell. In 2018, sorghum exports were substantially reduced further after China self-initiated an AD/CVD investigation that led to the imposition of preliminary antidumping duties of 179 percent in May of that

²⁸ See Gale, F. (2015). Development of China's feed industry and demand for imported commodities. *US Department of Agriculture, FDS-15K-01*.

²⁹ Ibid. The report notes that China's inspection and quarantine authority reported that a combined 1.4 million metric tons of U.S. corn and DDGS were rejected during 2014.

³⁰ <http://english.mofcom.gov.cn/article/policyrelease/announcement/201610/20161001495628.shtml> and <http://english.mofcom.gov.cn/article/newsrelease/significantnews/201701/20170102500829.shtml>

³¹ See De Oliveira, V. (2016). Effects of China's Trade Policies on the US Distiller's Dried Grains. University of Nebraska-Lincoln.

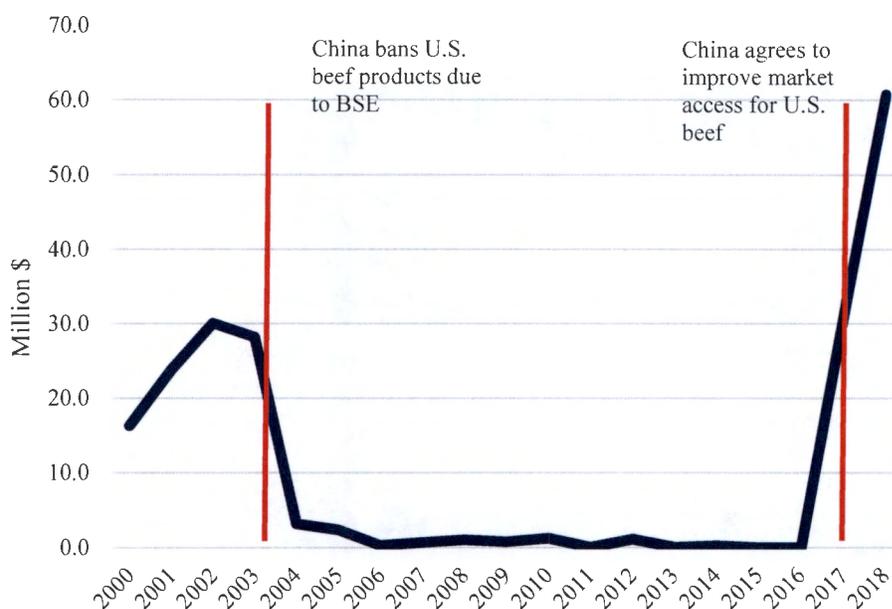
same year.³² While China unilaterally terminated both the AD and CVD investigations in June 2018, U.S. sorghum exports have not recovered given retaliatory tariffs put in place in July 2018.

Beef

China had banned U.S. beef since the December 2003 discovery of bovine spongiform encephalopathy (BSE) in the United States. Although the U.S. risk-status was restored to negligible in 2013, China continued to block the importation of U.S. beef and beef products.

In September 2016, China announced it would take the first steps towards lifting the ban on U.S. beef and restore market access. A Virginia Tech study found that without BSE and the subsequent restrictions imposed by China, U.S. exports could have been up to 80,000 MTs higher.³³ In mid-2017, China and the United States agreed to improved market access for U.S. beef exports to China.³⁴ (figure 11)

Figure 11. U.S. beef exports to China in million dollars



Source: U.S. Census.

EU NTBs affecting U.S. agricultural exports

While the EU maintains high tariffs on a number of agricultural products, its use of NTBs, particularly sanitary and phytosanitary (SPS) measures, have had substantial effects on U.S. agricultural exports and contribute to the negative agricultural trade balance with the EU. The National Trade Estimate Report, published annually by USTR, provides extensive information and background on the myriad NTBs affecting U.S. agricultural trade with the EU, and is the basis for the background information in this section.³⁵ This discussion is not intended to be exhaustive but rather illustrative of the types of EU NTBs affecting U.S. agriculture.

³² China never announced a preliminary CVD rate.

³³ See Peterson, E., J. Grant, and S. Sydow, (2017). Evaluating the Trade Impacts of Bovine Spongiform Encephalopathy (BSE) using historical simulations. *Center for Agricultural Trade Research Report, Virginia Tech.*

³⁴ On June 12, 2017, USDA announced that it had reached an agreement with Chinese officials on the final details of a protocol to allow the United States to begin exporting beef to China. See <https://www.usda.gov/media/press-releases/2017/06/12/us-china-finalize-details-send-us-beef-china>

³⁵ See https://ustr.gov/sites/default/files/2019_National_Trade_Estimate_Report.pdf for the most recent report.

Beef and Pork

The EU continues to apply measures that ban or restrict the importation of meat produced using hormones, beta agonists such as ractopamine, and other growth promotants, despite scientific evidence that such meat is safe for consumers. In the case of hormones, the WTO found the EU's ban to be inconsistent with the WTO SPS Agreement and the EU was obligated to bring the measure into compliance. When the EU failed to comply with the ruling, the WTO granted the United States authorization in 1999 to suspend concessions valued at \$116.8 million, which reflected the annual damage to U.S. beef exports to the EU that was due to the ban.

Beginning in 2009, negotiations between the United States and the EU led to the creation of a duty-free import quota for grain-fed, high quality beef (HQB) as part of a compromise solution to the dispute. However, the quota was not specific to U.S. beef, and U.S. market share was eroded by other exporters (Argentina, Australia, Canada, New Zealand, and Uruguay) that were also eligible to export under the quota. Subsequent bilateral negotiations led to an updated agreement in the spring of 2019 that provides a U.S. country specific quota allocation, starting at 18,500 metric tons and increasing to 35,000 metric tons after 7 years. Implementation of the agreement awaits approval by the EU Parliament.

In 2016, USDA's Economic Research Service (ERS) has published estimates of forgone trade due to certain EU NTMs.³⁶ The estimated foregone level of U.S. beef exports due to the EU's ban on growth hormones and the use of certain pathogen reduction treatments is almost \$500 million annually. For pork, the estimated foregone level of U.S. exports due to the EU's ban on ractopamine is \$1.8 billion annually.

Poultry

The EU's restrictions on the use of certain pathogen reduction treatments (PRTs) have also negatively impacted U.S. poultry exports to the EU. The EU has not approved PRTs for poultry that are permitted in the United States and are in line with international standards, and in 1997 began blocking imports of U.S. poultry products processed with PRTs. Despite a favorable scientific opinion from the European Food Safety Authority on the safety and efficacy of peroxyacetic acid (PAA) as a PRT for poultry in 2014, the EU market remains closed for U.S. poultry treated with PAA or any other PRT. Based on the ERS analysis cited above, the estimated foregone level of U.S. poultry exports due to the EU's ban on the use of certain pathogen reduction treatments is \$145 million annually.³⁷

Specialty Crops

The EU's system for setting maximum residue levels (MRLs) has long created uncertainty and raised compliance costs for U.S. specialty crops such as fruits and vegetables. Moreover, U.S. growers are unable to adopt new plant protection products if the EU has not established a MRL, or if established, is set at a level that is not commercially viable. More recently, in January 2019 the EU published regulations that set MRLs for certain substances at the limit of detection, which will affect important crop protection products used for virtually all horticultural and row crops, as well as some value added products such as wine. Based on the 2016 ERS study previously cited, the estimated foregone level of total U.S. exports of fruits and vegetables due to EU's MRLs is almost \$1 billion annually.³⁸ Actual foregone exports may be higher since this estimate does not reflect the increased stringency in regulations as of January 2019.

³⁶Using a gravity model approach, the authors estimated the foregone level of trade by taking the difference between the gravity model's predicted value of trade without the NTMs present and the actual observed value of trade with the NTMs in place, using a base year of 2011. See page 30 of Arita, S. L. Mitchell, and J. Beckman. (2015).

³⁷ Ibid.

³⁸ Ibid.

Agricultural Biotechnology

There are numerous NTBs that impact U.S. agricultural biotechnology. In general, the EU biotechnology policy is unpredictable, and the authorization process for biotech products is subject to significant delays and imposes excessive data requirements on applicants, despite these products being approved in the United States. U.S. exports of corn and rice are particularly affected by the EU's asynchronous biotech approvals. The ERS study estimated the foregone level of U.S. corn and soybean exports due to the EU's restrictions on biotechnology at almost \$2 billion annually.³⁹

Biodiesel and Ethanol

In June 2008, the EU initiated an AD/CVD investigation on U.S. biodiesel. Final AD rates were set in July 2009 at 0-36.2 percent (0 to 198 euros/metric ton) and final CVD rates at 29.1-41.1 percent (211.2 euros per metric ton to 237 euros per metric ton) for U.S. biodiesel blends of 20 percent and above. An anti-circumvention investigation in 2011 resulted in all biodiesel exports, regardless of blend ratio, facing AD/CVD rates, which were continued by an expiry review in 2014-15 for another 5 years (until September 2020).

In November 2011, the EU initiated an AD investigation of U.S. ethanol for fuel, which resulted in an AD margin of 62.3 euros/ton in February 2013. Combined with the EU's very high import tariffs on ethanol (102 euros/1,000 liters for denatured ethanol and 192 euros/1,000 liters for undenatured ethanol), the total tariff on U.S. ethanol was 151.2 euros/1,000 liters and 241.2 euros/1,000 liters and led to sharp declines in U.S. exports.⁴⁰

The AD measure on ethanol was terminated in May 2019 based on the results of an expiry review. With the lifting of the AD duty, there was some resumption of trade. However, the EU's high tariff rates and sustainability requirements mean that U.S. exports are not expected to reach previous levels.⁴¹

India NTBs affecting U.S. agricultural exports

India maintains a significant number of NTBs that affect U.S. agricultural exports, including ethanol, dairy, processed foods and beverages, pork, alfalfa hay, wheat, barley, peas, pulses, cherries, strawberries, and pet food.⁴² In 2012, the United States initiated a WTO case on India's import prohibitions on poultry and poultry products, based on purported concerns with avian influenza.⁴³ The WTO panel ruled in favor of the United States. The Appellate Body upheld the findings, and the period for India to come into compliance was set at June 19, 2016. In July 2016, the United States requested authorization to suspend concessions, valued at \$450 million in 2016, given that India had not brought the measure into compliance within the reasonable period of time. India objected to this level and requested that the matter be referred to arbitration. In April 2017, India requested the formation of a compliance panel to determine if India's revised measure complied with the ruling. The parties postponed release of the Arbitrator's decision and the next steps in the compliance proceeding as the two sides continue to discuss potential resolution to the dispute.

³⁹ Ibid.

⁴⁰ https://apps.fas.usda.gov/newgainapi/api/report/downloadreportbyfilename?filename=Biofuels%20Annual_The%20Hague_EU-28_8-9-2019.pdf

⁴¹ Ibid. See also USTR 2019 National Trade Estimate Report on Foreign Trade Barriers, pp. 178-79 for more details on the EU's sustainability requirements for renewable fuels.

⁴² See USTR 2019 National Trade Estimate Report on Foreign Trade Barriers, pp. 237-245, for more details.

https://ustr.gov/sites/default/files/2019_National_Trade_Estimate_Report.pdf

⁴³ See https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds430_e.htm

Trade remedies affecting U.S. agricultural products

In addition to China's AD/CVD investigations of U.S. broilers, DDGS, and sorghum, and the EU's AD/CVDs on U.S. ethanol and biodiesel, all of which are described above, other countries have initiated AD/CVD investigations of U.S. agricultural products and applied AD/CVDs on U.S. exports. Other U.S. products are currently subject to AD/CVD investigations, including U.S. ethanol exports to Peru and Colombia, and U.S. corn exports to Peru. These three investigations were still ongoing at the time this report was drafted.

South Africa Poultry

At the end of 2000, South Africa imposed antidumping duties on U.S. frozen bone-in poultry parts, such as chicken leg quarters (CLQs) with final dumping rates of 2.24 rand/kg to 6.96 rand/kg, depending on the supplier. U.S. exports plummeted to nearly zero. By 2010, U.S. exports had started to recover, but in February 2012, the dumping margin was increased to 9.40 rand/kg⁴⁴ on all U.S. exporters, as the result of a second expiry review that began in June 2011. While the AD order remains in place, the poultry industries in the United States and South Africa reached an agreement in June 2015 to allow a quota of 65,000 metric tons of U.S. CLQs at a tariff rate of 37 percent.⁴⁵

In 2016, USDA's Economic Research Service published a report that analyzed two tariff scenarios in which the AD duties on U.S. poultry are removed and face the MFN tariff rate of 37 percent.⁴⁶ In the first scenario, the EU maintains preferential access (duty-free, quota-free) to South Africa's poultry market under a bilateral free trade agreement. In the second scenario, all exporters, including the EU, face the 37 percent MFN duty.⁴⁷ In the first scenario, U.S. CLQ exports increase from less than 1,000 metric tons in the base to nearly 71,000 metric tons and the U.S. captures, on average, 35 percent of the South African market for CLQs during 2012-14. Removing the EU's preference results in an increase in U.S. CLQs of 81,100 metric tons, and a market share of 63 percent.

Specialty Crops⁴⁸

U.S. specialty crops have been subject to AD/CVD investigations in past years,⁴⁹ but only one product (white potatoes) is currently subject to AD duties.⁵⁰ The United States has conducted a number of AD/CVD investigations on imported specialty crops. A list of current AD/CVD orders in place can be

⁴⁴ ERS calculates an ad valorem equivalent (AVE) of this antidumping duty of 65 percent. See Cochrane, N., Hansen, J., & Seeley, R. (2015). Poultry Production and Trade in the Republic of South Africa: A Look at Alternative Trade Policy Scenarios. *Economic Research Service, United States Department of Agriculture, AES-96.*

⁴⁵ Any U.S. CLQs exported above the 65,000 metric ton quota would be subject to the AD rate.

⁴⁶ Ibid.

⁴⁷ This scenario is based on a request the South African poultry industry made to the South African government in 2016 to impose a 37 percent safeguard on bone-in poultry from the EU. This scenario allows for analysis of the impacts of the EU's preferential trade agreement with South Africa. However, including the results from this scenario is not intended to suggest that the EU's preferential trade agreement with South Africa is a NTB.

⁴⁸ Fruits, vegetables, tree nuts, and sweeteners.

⁴⁹ Canada previously conducted AD investigations on U.S. apples, fresh tomatoes, yellow onions, and refined sugar, among other non-specialty products. Mexico previously conducted AD investigations on U.S. apples and high fructose corn syrup (HFCS), among other non-specialty products. In some cases, AD duties were imposed but none of these orders are currently in effect. See <https://enforcement.trade.gov/trcs/foreignadcvd/archive/index.html> for more information.

⁵⁰ A narrow category of U.S. whole potatoes for use or consumption in British Columbia has been subject to AD orders since 1983. For more information see USDA/FAS GAIN Report CA18054 "Canada Potatoes and Potato Products Annual 2018."

https://apps.fas.usda.gov/newgainapi/api/report/downloadreportbyfilename?filename=Potatoes%20and%20Potato%20Products%20Annual%202018_Ottawa_Canada_9-24-2018.pdf

obtained from the website of the U.S. International Trade Commission (USITC).⁵¹ The USITC website is also the source for import injury investigation reports for active AD/CVD investigations,⁵² as well as ongoing general fact-finding reports, including those requested under Section 332, some of which focus on conditions of competition between U.S. and foreign industries.⁵³

Current AD/CVD orders on U.S. imports of specialty crops include: pistachios from Iran, fresh garlic from China, preserved mushrooms from Chile, China, India, and Indonesia; honey from China, and ripe olives from Spain. On September 23, 2019, the U.S. Department of Commerce (Commerce) issued a preliminary determination in the AD/CVD investigations of imports of dried tart cherries from Turkey. The preliminary AD rate is ranges from 541.29 to 648.35 percent and the preliminary CVD rate is 204.93 percent. Commerce's final determination is expected on or about December 5, 2019. If Commerce's final determinations are affirmative, the USITC is scheduled to make its final AD and CVD injury determinations on or before January 21, 2020.⁵⁴

The U.S. Department of Commerce may suspend an AD investigation if there is an agreement between the Department and the producer/exporters accounting for substantially all U.S. imports on certain provisions, such as reference prices, that will remove the injurious effects of the exports.⁵⁵ Currently, there are three investigations on agricultural products that have been suspended: lemon juice from Argentina, sugar from Mexico, and fresh tomatoes from Mexico.⁵⁶

SECTION 2: Market Facilitation Program Payments

As of Friday, October 18, 2019, estimated 2018 Market Facilitation Program (MFP) payments totaled \$8,575,652,585. 2018 MFP payments totals by State and commodity are presented in Appendix 3. An estimate of additional 2018 MFP payments are also presented in Appendix 3.

Estimated 2019 MFP payments as of Friday, October 18, 2019, totaled \$5,943,785,931. 2019 MFP payment totals by State and commodity group are presented in Appendix 4. Commodity-specific payment data for 2019 MFP is not yet available.

Sign-up for the 2019 MFP ends on December 6, 2019, so it is possible that not all eligible producers have signed up for the program as of October 18. An estimate of remaining 2019 MFP payments by commodity group are also presented in Appendix 4.

⁵¹ See AD/CVD Orders in Place (XLS) at <https://pubapps2.usitc.gov/sunset/>

⁵² See https://www.usitc.gov/investigations/import_injury?f%5B0%5D=field_investigation_status%3Aactive

⁵³ Under Section 332, the USITC investigates a wide variety of trade matters on its own initiative or upon request from the President, the Senate Finance Committee, the House Ways and Means Committee, or the U.S. Trade Representative. See https://www.usitc.gov/research_and_analysis/what_we_are_working_on.htm. Previous studies of the competitive landscape for U.S. agricultural producers and processors include: Olive Oil: Conditions of Competition between U.S. and Major Supplier Industries (Inv. 332-537) and Canned Peaches, Pears, and Fruit Mixtures: Conditions of Competition between U.S. and Principal Supplier Industries, Inv. 332-485. Forthcoming studies include: Global Economic Impact of Missing Low Pesticide Maximum Residue Levels, Inv. 332-573.

⁵⁴ The USITC's preliminary injury finding can be found at https://www.usitc.gov/publications/701_731/pub4902.pdf

⁵⁵ In the case of a CVD investigation, the agreement is between Commerce and the foreign government.

⁵⁶ See <https://enforcement.trade.gov/agreements/index.html>

SECTION 3: Account of Commodity Purchases by Substantially Foreign-Owned Companies or their Subsidiaries

This section of the report provides details on purchases through the Food Purchasing and Distribution Program (FPDP) and an account of commodities purchased from businesses that are substantially foreign-owned or their subsidiaries.

For all commodity procurement programs, USDA is required to ensure that what is purchased was grown and processed within the U.S. and its territories. Approximately 136 vendors participated in the 2018 FPDP and were awarded contracts during the trade mitigation purchases that accounted for \$1.1 billion. Commodities purchased from businesses that are substantially foreign-owned (or their subsidiaries) for the 2018 FPDP are presented in Table 1. Pre-solicitation announcements for the 2019 FPDP were released on September 30, 2019. Purchases under the 2019 FPDP have not yet started.

Table 1. Foreign-Owned Vendors Awarded Contracts in the 2018 FPDP

Vendor	Product	Pounds Awarded	Value Awarded	Total Purchased All Vendors	Country of Ownership
Cavendish Farms	Potatoes	236,021	\$30,232	\$35,759,852	Canada
Cherryfield Foods	Blueberries	760,320	\$895,236	\$1,755,636	Canada
Del Monte Foods	Potatoes	991,440	\$465,977	\$35,759,852	Philippines
JBS USA Food Company	Pork	42,301,060	\$90,075,263	\$458,968,614	Brazil
McCain Foods USA	Potatoes	15,460,161	\$2,281,991	\$35,759,852	Canada
Sunrise Growers	Strawberries	1,188,000	\$1,391,808	\$1,391,808	Canada
Total		60,937,002	\$95,140,507	\$569,395,614	

Apart from FPDP, USDA utilizes its approved suppliers to solicit competitive bids for American grown and processed food products, awards contracts, and arranges for their distribution to various nutrition assistance outlets. Companies must purchase raw materials, such as hogs, from only American farmers and process those raw materials into consumer packages in plants located in America. This nutritious and wholesome food is delivered to people across America through a network of food banks and pantries.

USDA procures over \$3 billion annually as part of nutrition assistance purchases such as the school lunch program. All these products, like those purchased in FPDP, are 100 percent domestically produced and processed. These important programs serve the dual purpose of supporting nutrition deficient families and American agriculture. USDA purchases only American commodities produced on American farms by American farmers that are processed in American plants.

For example, in fiscal year 2019 USDA purchased \$773 million of American products as a part of one of USDA’s food programs. Of this amount over \$290 million was purchased from vendors representing companies that are not U.S. owned. While some suppliers of food in the U.S. are non-domestically owned, they operate processing plants across the U.S. that employ Americans for their workforce and directly support American farmers and local economies across numerous states.

APPENDICES

1. 2018 Trade Damage Methodology Report
2. 2019 Trade Damage Methodology Report
3. 2018 MFP Payments by State and by Commodity, as of October 19, 2019
4. 2019 MFP Payments by State and by Commodity Group, as of October 19, 2019 and Estimate of Remaining Total 2019 MFP Payments by Commodity Group

Appendix 1

Insert 2018 Trade Damage Methodology Report

https://www.usda.gov/oce/trade/USDA_Trade_Methodology_Report_2018.pdf

Appendix 2

Insert 2019 Trade Damage Methodology Report

https://www.usda.gov/oce/trade/USDA_Trade_Methodology_Report_2019.pdf

Appendix 3

2018 MFP Payments, By State, By Commodity, as of Friday, October 18, 2019										
State	Corn	Cotton	Dairy	Fresh Sweet Cherries	Hogs	Shelled Almonds	Sorghum	Soybeans	Wheat	Grand Total
Alabama	\$309,685	\$25,207,605	\$104,616		\$55,080		\$54,349	\$20,523,050	\$900,379	\$47,154,764
Alaska			\$2,460						\$1,123	\$3,583
Arizona	\$41,048	\$11,793,468	\$3,413,698	\$4,680			\$32,716		\$728,876	\$16,014,486
Arkansas	\$910,963	\$30,715,334	\$103,760		\$269,668		\$354,942	\$248,488,167	\$762,120	\$281,604,954
California	\$57,769	\$14,679,425	\$39,653,287	\$7,259,595	\$30,816	\$21,904,008	\$111,943	\$48,898	\$992,280	\$84,738,021
Colorado	\$1,474,160	\$35,019	\$3,158,262	\$98,889	\$100,521		\$8,250,231	\$1,608,861	\$8,411,074	\$23,137,017
Connecticut	\$2,034		\$425,395		\$8,600			\$27,382	\$178	\$463,589
Delaware	\$211,787	\$5,524	\$104,788		\$12,753		\$33,973	\$10,789,238	\$286,028	\$11,444,091
Florida	\$30,333	\$2,499,531	\$1,528,532	\$0	\$31,560	\$0	\$10,236	\$462,437	\$3,609	\$4,566,238
Georgia	\$373,141	\$53,564,788	\$903,090		\$196,929		\$393,286	\$6,438,336	\$379,570	\$62,249,140
Hawaii			\$23,817		\$27,415					\$51,232
Idaho	\$146,668		\$10,878,222	\$236,066	\$57,759	\$3,376	\$4,770	\$21,409	\$13,079,976	\$24,428,246
Illinois	\$21,111,920	\$51,565	\$1,961,276		\$17,179,394		\$1,166,171	\$1,066,757,560	\$3,861,179	\$1,112,089,065
Indiana	\$9,330,037	\$2,776	\$1,927,996	\$333	\$9,877,918		\$796,545	\$549,237,256	\$2,128,454	\$573,301,315
Iowa	\$24,049,695	\$53,102	\$4,347,491		\$49,389,766		\$176,705	\$909,733,101	\$121,271	\$987,871,131
Kansas	\$6,357,974	\$9,012,776	\$1,560,053		\$3,055,532		\$160,689,099	\$324,644,225	\$34,196,464	\$539,516,123
Kentucky	\$1,985,380	\$2,122	\$784,753		\$1,140,248		\$242,773	\$147,789,905	\$2,714,300	\$154,659,481
Louisiana	\$702,241	\$10,938,935	\$203,891				\$312,281	\$93,579,019	\$51,094	\$105,787,461
Maine	\$6,513		\$685,173		\$21,760			\$47,737	\$5,499	\$766,682
Maryland	\$436,406		\$793,500	\$9,712	\$92,432		\$179,618	\$34,063,519	\$961,580	\$36,536,767
Massachusetts	\$1,875		\$246,602	\$7,526	\$63,137			\$41,207	\$86	\$360,433
Michigan	\$2,578,545	\$0	\$8,473,511	\$124,435	\$2,822,383		\$280,633	\$174,595,625	\$4,694,474	\$193,569,606
Minnesota	\$12,948,566	\$49,164	\$9,118,261		\$33,828,833		\$81,044	\$612,742,735	\$12,759,850	\$681,528,453
Mississippi	\$726,840	\$38,858,724	\$153,027		\$16,520		\$131,485	\$178,215,870	\$164,616	\$218,267,082
Missouri	\$4,373,379	\$22,819,380	\$1,022,753		\$4,014,162		\$1,734,972	\$407,827,364	\$3,600,353	\$445,392,363
Montana	\$31,133	\$0	\$306,148	\$252,840	\$1,736,238		\$10,978	\$633,330	\$25,948,233	\$28,918,900
Nebraska	\$17,101,953	\$34,302	\$907,374		\$8,745,958		\$8,318,372	\$534,389,980	\$6,308,327	\$575,806,266
Nevada	\$264		\$638,020						\$38,235	\$676,519
New Hampshire			\$293,917	\$856	\$4,664			\$1,446		\$300,883
New Jersey	\$61,229		\$121,495	\$1,756	\$17,824		\$46,692	\$6,372,864	\$83,981	\$6,705,841
New Mexico	\$42,713	\$3,076,357	\$7,719,195	\$1,308	\$0		\$921,994	\$23,660	\$175,294	\$11,960,521
New York	\$621,032	\$0	\$13,414,628	\$116,544	\$195,498		\$20,238	\$25,856,597	\$746,367	\$40,970,904
North Carolina	\$843,830	\$19,742,083	\$776,689		\$1,387,463		\$234,134	\$79,444,390	\$2,958,145	\$105,386,734
North Dakota	\$3,958,420	\$0	\$336,419	\$458	\$767,871	\$12	\$13,128	\$386,716,192	\$54,099,467	\$445,891,967
Ohio	\$5,766,813	\$38,024	\$4,391,049	\$26,345	\$6,682,297		\$30,700	\$450,566,556	\$4,102,381	\$471,604,165
Oklahoma	\$370,070	\$19,928,139	\$377,780		\$154,208	\$2,640	\$9,202,243	\$28,879,956	\$7,332,954	\$66,247,990
Oregon	\$52,377		\$2,033,692	\$7,387,314	\$53,904	\$0		\$17,768	\$5,891,810	\$15,436,865
Pennsylvania	\$806,924	\$0	\$7,337,194	\$14,641	\$2,187,292		\$182,093	\$39,382,472	\$720,855	\$50,631,471
Puerto Rico	\$50		\$739,278		\$105,168		\$112,522			\$957,018
Rhode Island			\$10,587		\$3,360					\$13,947
South Carolina	\$308,136	\$11,674,671	\$268,314		\$171,152		\$129,066	\$11,219,728	\$416,371	\$24,187,438
South Dakota	\$7,296,991	\$6,170	\$1,937,684		\$8,900,245		\$8,872,188	\$393,314,615	\$9,806,269	\$430,134,162
Tennessee	\$973,429	\$21,903,915	\$740,488	\$164	\$215,457		\$154,578	\$112,167,210	\$2,172,480	\$138,327,721
Texas	\$1,696,561	\$182,212,106	\$7,965,515		\$138,577	\$10,796	\$40,978,655	\$6,365,257	\$5,512,136	\$244,879,603
Utah	\$38,921		\$1,911,309	\$47,402	\$138,545				\$593,297	\$2,729,474
Vermont	\$3,868		\$2,872,881		\$35,081			\$450,941	\$544	\$3,363,315
Virginia	\$442,581	\$5,155,528	\$1,472,745	\$604	\$53,586		\$105,748	\$37,407,904	\$1,096,963	\$45,735,659
Washington	\$79,587		\$5,519,412	\$27,088,552	\$57,336		\$5,864	\$89,284	\$20,558,544	\$53,398,579
West Virginia	\$37,416		\$124,411		\$3,288			\$1,724,602	\$15,723	\$1,905,440
Wisconsin	\$4,739,606	\$19,074	\$28,415,672	\$6,116	\$1,532,896		\$172,381	\$166,587,741	\$1,678,216	\$203,151,702
Wyoming	\$75,553		\$141,457		\$3,696		\$5,602	\$42,189	\$559,681	\$828,178
Grand Total	\$133,516,416	\$484,079,607	\$182,351,567	\$42,686,136	\$155,584,790	\$21,920,832	\$244,554,948	\$7,069,337,583	\$241,620,706	\$8,575,652,585

Note, that the 2019 Supplemental Appropriations for Disaster Relief Act (P.L. 116-20) expanded the adjusted gross income (AGI) criteria, which may increase 2018 MFP payments by as much as an estimated \$50 million (potentially \$30 million for crops; \$10 million for dairy and hogs; and \$10 million for specialty crops).

Appendix 4

2019 MFP Payments, By State, by Category, as of Friday, October 18, 2019, and Estimated 2019 MFP Payments Remaining

State	Livestock	Non-specialty crops	Specialty crops	Grand Total
Alabama	\$94,753	\$48,192,715	\$110,709	\$48,380,539
Alaska	\$2,050	\$80,129		\$82,179
Arizona	\$3,271,037	\$18,143,248	\$69,755	\$21,484,040
Arkansas	\$563,229	\$179,520,813	\$256,573	\$180,340,616
California	\$13,785,659	\$17,251,123	\$15,394,075	\$46,430,857
Colorado	\$1,806,305	\$26,630,704	\$95,925	\$28,532,934
Connecticut	\$214,729	\$127,705	\$3,503	\$345,938
Delaware	\$44,167	\$4,594,167		\$4,638,335
Florida	\$1,262,019	\$7,758,803	\$36,135	\$9,056,958
Georgia	\$888,166	\$135,528,783	\$4,582,267	\$140,999,216
Hawaii	\$3,058	\$0	\$52,414	\$55,472
Idaho	\$7,642,751	\$23,037,379	\$389,734	\$31,069,863
Illinois	\$13,928,680	\$653,822,888	\$25,577	\$667,777,144
Indiana	\$9,215,194	\$318,987,625	\$12,557	\$328,215,376
Iowa	\$38,414,011	\$676,572,248	\$38,006	\$715,024,265
Kansas	\$2,154,342	\$398,149,956	\$190,726	\$400,495,024
Kentucky	\$1,870,136	\$98,945,923	\$7,860	\$100,823,920
Louisiana	\$124,626	\$63,233,819	\$181,808	\$63,540,253
Maine	\$399,534	\$902,287	\$13,951	\$1,315,773
Maryland	\$534,896	\$20,521,417	\$5,542	\$21,061,855
Massachusetts	\$186,069	\$153,373	\$2,587,629	\$2,927,071
Michigan	\$6,740,563	\$90,561,519	\$194,374	\$97,496,456
Minnesota	\$31,377,085	\$445,500,668	\$25,351	\$476,903,104
Mississippi	\$109,228	\$146,898,565	\$291,557	\$147,299,351
Missouri	\$3,201,995	\$246,734,143	\$260,156	\$250,196,294
Montana	\$1,094,123	\$86,000,585	\$34,202	\$87,128,910
Nebraska	\$6,058,180	\$409,405,372	\$10,803	\$415,474,355
Nevada	\$695,718	\$1,305,643		\$2,001,361
New Hampshire	\$193,204	\$110,135		\$303,338
New Jersey	\$62,161	\$2,673,864	\$496,667	\$3,232,692
New Mexico	\$3,647,799	\$8,181,096	\$426,883	\$12,255,778
New York	\$6,944,242	\$14,192,951	\$171,504	\$21,308,697
North Carolina	\$1,572,142	\$84,582,172	\$71,479	\$86,225,792
North Dakota	\$244,237	\$317,813,234	\$2,396	\$318,059,867
Ohio	\$6,759,069	\$195,883,461	\$21,646	\$202,664,177
Oklahoma	\$277,821	\$74,486,599	\$1,634,405	\$76,398,825
Oregon	\$1,216,555	\$8,779,344	\$6,265,654	\$16,261,553
Pennsylvania	\$5,101,313	\$21,059,751	\$2,721	\$26,163,785
South Carolina	\$248,089	\$26,927,953	\$51,909	\$27,227,951
South Dakota	\$6,936,866	\$233,473,428	\$1,422	\$240,411,715
Tennessee	\$518,220	\$102,780,482	\$10,130	\$103,308,831
Texas	\$5,484,703	\$331,789,993	\$1,807,070	\$339,081,767
Utah	\$1,610,656	\$4,965,612	\$99,961	\$6,676,229
Vermont	\$1,228,347	\$513,687		\$1,742,033
Virginia	\$825,524	\$30,605,813	\$7,310	\$31,438,647
Washington	\$3,095,509	\$21,983,317	\$4,449,136	\$29,527,962
West Virginia	\$74,143	\$1,273,073		\$1,347,216
Wisconsin	\$15,215,625	\$87,272,339	\$4,177,612	\$106,665,577
Wyoming	\$118,049	\$4,267,993		\$4,386,042
Grand Total	\$207,056,578	\$5,692,160,258	\$44,569,096	\$5,943,785,931
Estimated Remaining 2019 MFP Payments	\$792,943,423	\$7,307,839,742	\$455,430,904	\$8,556,214,069