

USMCA, Supply Management, Suspension Agreements, and Retaliatory Tariffs
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Abstract

The United States-Mexico-Canada Agreement (USMCA) was signed on November 30, 2018, but still needs to be ratified by all three governments. We analyze the implications of the proposed USMCA for trade involving agricultural goods. The major concession in agriculture will be the increased access of U.S. dairy and poultry to Canadian markets. We also review the major barriers involving agricultural trade in the United States, Canada, and Mexico that would still exist even if the USMCA were to be signed into force. These include the core system of Canadian supply management for dairy and poultry and U.S.-Mexico suspension agreements for sugar and tomatoes. We also discuss the implications of the retaliatory tariffs placed on U.S. agriculture in 2018 and the resulting assistance programs, such as the Market Facilitation Program (MFP), aimed at compensating U.S. farmers for losses incurred from retaliatory tariffs.

Introduction

The United States-Mexico-Canada Agreement (USMCA) was proposed September 30, 2018 and was signed on November 30, 2018, but still needs to be ratified by all three governments. United States Congress will not consider the USMCA until 2019, when the Democratic Party has control of the House of Representatives. If the agreement is signed into force, a joint review of the operation of the agreement will be conducted every six years thereafter. If all parties do not wish to renew the agreement after it is reviewed, the agreement

would expire 10 years after the review. Furthermore, to prevent effective balance of payments adjustment or to gain an unfair competitive advantage, each party agrees to be bound under the International Monetary Fund (IMF) Articles of Agreement to avoid manipulating exchange rates or the international monetary system (USTR, 2018).

The most significant changes in the proposed USMCA relate to the automobile sector. To receive duty free access under the proposed USMCA, the rule of origin requirement for automobiles will be raised to 75%, up from 62.5% under the North American Free Trade Agreement (NAFTA). In addition, 45% of an automobile must be produced in factories where workers are paid at least \$16/hour or it will not receive duty free access to North American markets (Chepeliev, Tyner, and Mensbrugge, 2018). The USMCA will also have a non-trivial effect on a small subset of agricultural goods traded among the United States, Mexico, and Canada. Annex 3-A of the proposed USMCA provides specific details regarding agricultural trade between the United States and Mexico, while Annex 3-B provides specific details regarding agricultural trade between the United States and Canada. Section C of Annex 3-B contains provisions for dairy pricing and exports and Section D contains specific provisions related to grain. Section E contains provisions related to Canada's Duties Relief Program and Import for Re-export Program. It also includes a provision that will allow access for sugar that is the product of Canada to any within-quota quantity of the refined sugar TRQ that is not allocated among other supplying countries (USTR, 2018).

We analyze the implications of the proposed USMCA for trade involving agricultural goods. We also review the major barriers involving agricultural trade in the United States, Canada, and Mexico that would still exist even if the USMCA were to be signed into force. These

include the core system of Canadian supply management for dairy and poultry and U.S.-Mexico suspension agreements for sugar and tomatoes. We also discuss the implications of retaliatory tariffs placed on U.S. agricultural goods by Canada, Mexico, and China and the resulting assistance programs, such as the Market Facilitation Program (MFP), aimed at compensating U.S. farmers for losses incurred from retaliatory tariffs.

Canadian Supply Management for Dairy and Poultry

Concessions under the proposed USMCA will result in increased market access, above existing World Trade Organization (WTO) levels, of over 12 million kg of additional U.S. agricultural products into Canadian markets. The major concession in agriculture will be the increased access of U.S. dairy and poultry to Canadian markets. The USMCA is expected to end Canada's Class 6 and 7 milk pricing and create additional tariff-rate quotas (TRQs) exclusively for U.S. dairy products above existing levels and will also expand the TRQ on Canadian poultry. Canada also agreed to provide the U.S. tariff-free access to 3.59% of its dairy market (Van Kooten, 2019). Chepeliev, Tyner, and Mensbrugge (2018) estimated that U.S. exports of dairy products to Canada would increase by 105% under the USMCA and U.S. exports of meat products to Canada would also increase by 12%. By the sixth year of the USMCA, additional access by the U.S. to the Canadian market will be granted for 50,000 metric tons (mt) of fluid milk; 12,500 mt of cheese; 10,500 mt of cream; 7,500 mt of skim milk powder; 4,500 mt of butter and cream powder; 4,135 mt of yogurt and buttermilk; 1,380 mt of concentrated and condensed milk; 690 mt of ice cream and ice cream mixes; 690 mt of "other" dairy; 520 mt of powdered buttermilk; and 2,760 mt of "products of natural milk constituents." U.S. access to each of the above categories will increase by 1% for an additional 13 years. U.S. whey exports

to Canada will receive 4,134 mt of additional access by the sixth year and will increase 1% for an additional four years after that. After 10 years, the over-quota tariff on whey will be eliminated (Nudds, 2018).

According to the United States Trade Representative, Canada "... will ensure that the price for skim milk solids used to produce nonfat dry milk, milk protein concentrates, and infant formula will be set no lower than a level based on the U.S. price for nonfat dry milk." (USTR, 2018). The agreement also binds Canada to "adopt measures designed to limit the impact of any surplus skim milk production on external markets." (USTR, 2018). Canada has also agreed to resume its program to encourage the use of skim milk domestically as animal feed and has made a new commitment to restrict exports of skim milk powder, milk protein concentrates and infant formula (USTR, 2018). Canada will implement an export restraint for skim milk powder and milk protein concentrates of 55,000 mt in the first year after USMCA enters into force, falling to 35,000 in the second year. Exports beyond that threshold will be subject to an export charge of C\$0.54/kg. A 13,333 mt cap on Canadian infant formula exports will be implemented in the first year, rising to 40,000 mt in the second year. Exports above that level will be subject to a surcharge of C\$4.25/kg. Both export restraints will rise by 1.2% per year after the second year, in line with Canada's historical population growth. The proposed USMCA will also eliminate tariffs for margarine in five years and the margarine rules of origin will be changed to allow for the use of "non-originating" palm oil in margarine manufacturing so that Canadian margarine will now satisfy the rules of origin required for tariff-free access. Open access for Canadian canola will continue and Canada will be able to export further processed products like margarine without tariffs being applied.

The proposed USMCA will also increase the TRQ on Canadian chickens by 57,000 mt by the sixth year, rising 1% for an additional 10 years and will allow additional TRQs of 10 million dozen U.S. eggs and egg-equivalent products in the first year, rising 1% per year for an additional 10 years. Canada has also agreed to allow 30% of import licenses for shell egg imports to be granted to new entrants. Under the WTO, the United States also remains eligible to export up to 39,844 mt of chicken and up to 21.37 million dozen egg and egg-equivalent products under its existing TRQ commitments. Under the proposed USMCA, Canada also agrees to provide the U.S. and other WTO members market access equivalent to no less than 3.5% of Canadian turkey production in the previous year and the U.S. maintains market access for broiler hatching eggs at 21.1% of Canadian domestic production as agreed to under the Canada-U.S. Free Trade Agreement (CUSTA). Despite Canadian concessions for dairy and poultry access described above, the core of the Canadian supply management system (e.g. Schmitz and Schmitz, 1994) will remain intact even if the USMCA is signed into force. The Canadian National and Provincial marketing boards will still allocate production quota to Canadian dairy and poultry producers, and although the TRQs have been expanded, they will still exist to restrict trade.

It is possible that the concessions agreed to under the USMCA might be the first step towards eventually dismantling the entire Canadian supply management system. Indeed, some have argued that this would eventually be good for Canadian dairy producers. If production quotas are eventually removed, herd sizes could expand and increased economies of scale could lead to larger, more efficient herds, with lower costs, which could eventually lead to Canada becoming a net dairy exporter as Canadian dairy becomes more competitive in

international markets. Van Kooten (2019) investigated how Canada might eliminate its dairy quota regime without overcompensating producers, based partially on analysis of previous buyouts of tobacco and peanut quota by Schmitz, Haynes, and Schmitz (2016). He found that, based on exchange-traded quota values, a 10-year buyout would cost \$5.9 billion. Alternatively, the theoretically correct measures of compensation (based on welfare economics) should fall between \$0.754 billion and \$1.319 billion, if based on average outcomes. However, it seems highly unlikely that Canadian supply management will be dismantled under the current Canadian administration, given the current political climate.

U.S.-Mexico Suspension Agreement on Sugar

The proposed USMCA includes very minor changes to the language involving trade in sugar between the U.S., Mexico, and Canada. Annex 3-A provides specific details regarding agricultural trade between the United States and Mexico. The only agricultural products specifically mentioned in Annex 3-A are sugar and syrup goods from Mexico. The proposed USMCA includes the following provisions on U.S.-Mexico trade in sugar and syrup goods:

With the exception of tariff-rate quotas (TRQ) set out in its schedule to the WTO Agreement, Mexico shall ensure that the customs duties for any TRQ it maintains for sugar or syrup goods on a most-favored-nation (MFN) basis are not less than the prevailing MFN rates of the United States for the same sugar and syrup goods.

Mexico shall not be required to apply the applicable preferential duty rate provided in this Agreement to a sugar or syrup good, or sugar-containing

product, that is a qualifying good when the United States has granted or will grant benefits under any re-export program or any like program in connection with the export of the good, including a good covered in paragraph 7 of Article 2.5 (National Treatment and Market Access – Drawback and Duty Deferral Programs). The United States shall notify Mexico in writing within two business days of any export to Mexico of such a good for which the benefits of any re-export program or any other like program have been or will be claimed by the exporter. (USTR 2018, pp. 3-A-1, 3-A-2).

Annex 3-B of the proposed USMCA provides specific details regarding agricultural trade between the United States and Canada (USTR, 2018). Section E of Annex 3-B includes the following provisions on U.S.-Canada trade in sugar:

Consistent with Article XIII of the GATT 1994, the United States shall allocate to Canada: (a) a share of the in-quota quantity of the refined sugar TRQ5 of not less than 10,300 metric tons, raw value, for sugar that is a product of Canada; and (b) a share of the in-quota quantity of the SCP TRQ4 of not less than 59,250 metric tons for SCPs that are the product of Canada.

Further to Paragraph 4, the United States shall permit access for sugar that is the product of Canada to any in-quota quantity of the refined sugar TRQ that is not allocated among supplying countries. The United States shall permit access to the unallocated amounts in a tariff-rate quota period without regard to whether

the share allocated to Canada for that period has been filled. (USTR 2018, p. 3-B-11).

There are no other provisions in the proposed USMCA that affects U.S. sugar policy. Therefore, existing U.S. barriers to trade in sugar will continue to persist even if the USMCA is signed into force. TRQs are currently allocated to 40 countries outside of Mexico and Canada for raw sugar by the U.S. government. The U.S. allocates a minimum of 1.14 million metric tons raw value of raw sugar quota to countries other than Mexico and Canada and each of those countries faces an over-quota tariff of \$15.36/cwt on raw sugar (Schmitz, 2018).

Although NAFTA was signed in 1994, access to U.S. sugar markets from all countries remained restricted through the imposition of TRQs until the beginning of 2008. Mexico and Canada were granted unlimited access to U.S. markets for raw sugar because of full implementation of NAFTA on January 1, 2008. Schmitz and Lewis (2015) estimated the impact of NAFTA on U.S. and Mexican sugar markets in each year from 2008 through 2013. They found that U.S. producers lost between \$474 million and \$1.3 billion, but U.S. consumers gained between \$654 million and \$1.6 billion annually. They also found that Mexican producers gained an average of \$405 million to \$833 million which was mostly offset by an average loss in Mexican consumer surplus of between \$376 million and \$766 million. NAFTA had almost no effect on total Mexican welfare and, somewhat counter-intuitively, had a negative impact in 2008.

In response to falling prices and extremely high raw sugar imports from Mexico, the American Sugar Coalition submitted antidumping and countervailing duty petitions against

Mexico on March 28, 2014. On October 27, 2014 both sides reached a tentative agreement which set minimum price floors for U.S. raw and refined sugar imports from Mexico. The tentative countervailing agreement limited Mexican exports of raw sugar to 100% of U.S. needs after accounting for U.S. production and imports from the rest of the world (as determined by USDA forecasts) and restricted U.S. imports of refined sugar to 53% of total exports from Mexico. On December 19, 2014 the U.S. and Mexico finalized the suspension agreement by imposing an import price floor on Mexico of \$22.25/cwt for unrefined sugar and \$26.00/cwt for F.O.B. milled sugar. On October 20, 2015, the U.S. International Trade Commission (USITC) unanimously agreed that Mexico's sugar industry harmed American sugar producers. The verdict means that the U.S.-Mexico suspension agreement on sugar will remain in effect until at least 2020 (Schmitz, 2018). This will not change under the proposed USMCA.

The WTO refers to an import price floor, such as that agreed to in the U.S.-Mexico suspension agreement, as a "price undertaking" (Moore, 2005). How does a price undertaking compare to other forms of trade restrictions? A price undertaking has a similar - but not identical - effect when compared to other trade barriers, such as a tariff, import quota, TRQ, or Voluntary Export Restraint (VER). In a perfectly competitive market, there exists an equivalent tariff that results in the same production, consumption, and trade volume as an import quota (Bhagwati, 1965). Similarly, given a specific domestic price, there exists an equivalent tariff that results in the same production, consumption, and trade volume as a price undertaking. However, this relationship holds true only if the price undertaking is binding (Schmitz, 2018). A TRQ, as implemented by the U.S. for sugar imported from the 40 countries outside of Mexico and Canada, is an import quota for any volume below the over-quota amount, that becomes a

tariff for any volume above the over-quota amount (Schmitz and Lewis, 2015). A VER is an import quota that is voluntarily agreed to by the exporting country (e.g., Allen, Dodge and Schmitz 1983; Picketts, Schmitz, and Schmitz 1991).

In the case of U.S. sugar, a price undertaking does not yield identical welfare results when compared to an “equivalent” tariff or VER for several reasons. First, Mexican exporters receive the import rents associated with a price undertaking. Under a tariff, the U.S. government would receive the tariff revenue. Second, a price undertaking is not binding at domestic market prices above the import price floor, whereas a tariff is always binding. Third, a price undertaking is a price instrument while an import quota and a VER are quantity instruments which do not have an equivalent tariff under imperfect competition or uncertainty (Harris, 1985). Finally, the WTO Agreement on Safeguards (1994) specified that member countries are not allowed to implement VERs, but they are still allowed to negotiate price undertakings (Moore, 2005).

Schmitz (2018) estimated the welfare implications of the U.S.-Mexico Suspension Agreement on sugar based on counterfactual simulations involving the previous seven years of free trade in sugar between the U.S. and Mexico (2008 - 2013). In years when the price floor would have been binding, on average, U.S. producers would have gained \$138 million and Mexican producers would have lost \$218 million if the suspension agreement had been in place. Schmitz also found that total Mexican welfare would have increased by an average \$11.5 million if the suspension agreement had been in place – a somewhat counterintuitive result.

In summary, NAFTA was signed in 1994, but it wasn't until 2008 that Mexico was allowed unfettered access to U.S. raw sugar markets. However, free Mexican access to U.S. raw sugar markets lasted only seven years. It was replaced by the U.S.-Mexico suspension agreement on sugar in 2014. The proposed USMCA does not contain any provisions that will return U.S.-Mexico sugar to free trade. The U.S.-Mexico suspension agreement on sugar will continue to exist through 2020, at the very least.

U.S.-Mexico Suspension Agreements on Tomatoes

Tomatoes are the highest valued fresh produce in the United States. Mexican tomatoes compete with domestic tomatoes produced in the state of Florida during the winter and early summer season (October-June). Mexico grows tomatoes primarily in the State of Sinaloa. Mexican tomato production is at its peak in the winter and early spring months (December-April) and then it decreases from May to June. Florida tomatoes are at their peak production levels in April and May. Mexican tomatoes are shipped mostly to the western U.S. and Florida tomatoes are shipped mostly to the Eastern U.S. Mexican tomatoes accounted for between 43% and 68% of the U.S. market during their production peak (Cook and Calvin, 2005).

Historically, the U.S. tomato trade with the Mexico has been contentious. U.S. tomato producers filed several anti-dumping cases against Mexico since the 1970s. In 1978, three Florida producer groups filed anti-dumping charges against winter produced vegetables from Mexico with the U.S. Department of Commerce. However, the charges of dumping could not be supported, and the case was dropped (Bredahl, Schmitz, Hillman 1987). After NAFTA entered into force, Florida tomato producers filed another complaint with the USITC claiming Mexican

tomatoes were a threat to the domestic industry. The USITC found that Mexican tomatoes caused material injury to domestic production and proposed anti-dumping tariffs. In December 1996, Mexican producers and the U.S. Department of Commerce reached an agreement to suspend the anti-dumping investigation. Mexican producers agreed to reduce production and agreed to a minimum reference price (price floor) of \$0.4647/kg. In December 2002, a new suspension agreement was reached (Baylis and Perloff, 2010). In 2008, the agreement was updated with a higher winter price floor of \$0.4782/kg.

Yet another new agreement was reached in March 2013 in which price floors were separated by production methods. Price floors of \$0.6834/kg and \$0.5418/kg were set for winter and summer respectively for tomatoes that were produced in open fields or adapted environments (such as shaded areas). Also, price floors of \$0.9038/kg and \$0.7167/kg per kilogram for winter and summer tomatoes were set for controlled (greenhouse) production. Specialty varieties also received price floors of \$1.3007/kg and \$1.0315/kg for winter and summer specialty variety packaged tomatoes. Specialty variety tomatoes that were sold loose received winter and summer price floors of \$0.9921/kg and \$0.7866/kg, respectively (Valdez-LaFarga, Schmitz, and Englin, 2019).

Kosse and Devadoss (2016) estimated the welfare implications of the U.S.-Mexico suspension agreement on tomatoes implemented in 2013. They found that Mexican producer prices fell by 8.39%, Mexican consumer prices declined by 3.88%, and Mexican exports to the U.S. declined by 2.06%. Some of Mexico's exports were diverted from the United States to Canada. Consequently, Canada increased its exports to the U.S. by 2.41%. Total U.S. field tomato imports fell by 13% and U.S. demand declined by 4%. Field tomato exports from U.S. to

Canada rose by 22%. In aggregate, U.S. tomato producer surplus increased by \$119 million, but consumers lost \$209 million. Canadian producers lost \$9.7 million in producer surplus, but Canadian consumers gained \$17 million. Mexican tomato producers lost a total of \$17.3 million, while Mexican consumers gained \$92 million. Therefore, the 2013 tomato suspension agreement resulted in a net increase in total Mexican welfare by \$74.7 million.

Asci et al. (2016) found that U.S. consumers perceive U.S. field grown tomatoes, U.S. greenhouse tomatoes, and Mexican field grown tomatoes to be substitutes, indicating strong competition between domestically produced tomatoes and imported tomatoes. However, they also found that the income effect of a price change is larger than the substitution effect, causing the demand for U.S. tomatoes to decrease in response to increases in Mexican tomato prices. In contrast, the demand for U.S. tomatoes would increase if total U.S. expenditure on all tomatoes were to increase. Therefore, a policy that increases the total expenditure on U.S. tomatoes would be better for U.S. tomato producers than the 2013 suspension agreement, because the quantity demanded of U.S. field grown tomatoes responds positively to an increase in U.S. expenditure on all tomatoes. They also find that the increase in the reference prices for Mexican tomatoes under the 2013 suspension agreement will reduce the quantity demanded of U.S. and Mexican tomatoes and will reduce the expenditure for U.S. tomatoes and Mexican field grown tomatoes.

In summary, over the 25-year duration of NAFTA, free trade in tomatoes between the U.S. and Mexico has never existed. Furthermore, the proposed USMCA will not make any changes to U.S. tomato trade policy. Therefore, existing reference prices for Mexican tomato exports to the U.S. will continue to benefit U.S. tomato producers into the future.

Retaliatory Tariffs of 2018

On March 1, 2018 the U.S. imposed a 25% tariff on steel and a 10% tariff on aluminum. Australia, Brazil, Argentina, and South Korea were granted permanent exemptions from the tariffs, but Canada, Mexico, and the EU were granted only temporary exemptions. On April 2, China imposed \$16.5 billion in retaliatory tariffs on many agricultural products from the U.S., including a 25% tariff on soybeans. On May 30, 2018, the U.S. imposed tariffs on steel and aluminum from Canada, Mexico and the EU. In retaliation, Mexico imposed a first round of \$3 billion in tariffs on American farm products on June 5 and then imposed a second round of nearly \$3 billion in tariffs on July 5. Mexico also eliminated preferential tariffs established under NAFTA on U.S. agricultural products including pork, potatoes and whiskey. On July 1, 2018 Canada imposed \$16.6 billion in retaliatory tariffs on the United States. The retaliatory tariffs imposed by Canada and Mexico will have lingering consequences for U.S. agricultural trade and may also negatively affect the probability that the proposed USMCA will be ratified, since the USMCA would not eliminate the \$16.6 billion in retaliatory tariffs imposed by Canada nor the nearly \$6 billion in retaliatory tariffs imposed by Mexico.

The trade war with China escalated on July 6, when the U.S. imposed 25% tariffs on 818 Chinese products worth \$34 billion and China retaliated by imposing 25% tariffs on 545 U.S. products, including 200 agricultural products, worth \$34 billion. On August 23, the U.S. imposed 25% tariffs on another \$16 billion in retaliatory tariffs against China. China immediately imposed 25% tariffs on \$16 billion in further retaliation. By this point, retaliatory tariffs on a

total of \$50 billion worth of goods had been imposed by both the U.S. and China in 2018. On September 24, the U.S. levied 10% tariffs on another \$200 billion worth of goods from China and announced that tariff rates would increase to 25% on January 1, 2019. In response, China imposed \$60 billion in additional tariffs.

In summary, the U.S. imposed a grand total of retaliatory tariffs on \$250 billion worth of Chinese goods in 2018, while China retaliated with tariffs on \$110 billion worth of U.S. goods. The above confluence of events led to a dramatic reduction in U.S. soybean prices and put downward pressure on the prices of many other U.S. agricultural products. On December 1, the U.S. and China agreed to a 90-day trade truce in which the U.S. agreed to not follow through on its threat to increase the tariff rates from 10% on September 24, 2018 to 25% on January 1, 2019 and China agreed to purchase a substantial amount of agricultural, energy, industrial and other products from the U.S. (Breuninger and David, 2018).

Zheng et al. (2018) predicted the potential impact of China's retaliatory tariffs on the U.S. farm sector using the Global Simulation Model (GSIM), which is the model the Federal Drug Administration (FDA) uses to analyze potential policy options with respect to trade in FDA-regulated products. They assumed an increase in the weighted average tariff rate of 25% imposed by China on U.S. exports of soybeans, pork, sorghum, and cotton. Based on a partial equilibrium model and data from 2016, the authors predicted a reduction in U.S. exports to China of 34% for soybeans, 83% for pork, 23% for sorghum, and 19% for cotton. They also predicted that U.S. producer surplus would decline by \$1.8 billion (4%) for soybeans, \$178 million (0.7%) for pork, \$246 million (10.5%) for sorghum, and \$67.6 million (1.3%) for cotton over the next year.

Taheripour and Tyner (2018) estimated the impact of Chinese retaliatory tariffs of 25% on U.S. soybeans, wheat, corn, and sorghum, using the GTAP-BIO model, which traces production, consumption, and trade of all goods and services by country. The authors updated the most recent GTAP model representing the world economy in 2011 using data from 2016 and predicted that U.S. soybean exports to China would be reduced by between 48% and 91%. However, U.S. global soybean exports would rise by 24% to partially offset the 48% reduction in U.S. exports to China, while Brazil would increase soybean exports to China by between 18% to 36%. In the long-run, the 25% retaliatory tariffs could reduce exports of U.S. soybeans to China by an estimated 17 million metric tons. They also found that retaliatory tariffs would decrease U.S. exports of corn, wheat, and sorghum to China by an estimated 42%, 82%, and 13%, respectively. However, total global U.S. exports of these goods would not be significantly affected, because exports of corn, wheat, and sorghum from the U.S. into other markets would mostly offset the decrease in exports to China.

As acknowledged by Taheripour and Tyner, the results from the GTAP simulations should be interpreted as medium to long-run estimates, not short-run impacts. Therefore, retaliatory tariffs would need to remain in effect for at least 3-5 years for robust results from the GTAP model. If the Chinese retaliatory tariffs of 25% were to last 3-5 years, U.S. soybean production would decline by an estimated 11% to 15% and U.S. sorghum production would decrease by 4%. Retaliatory tariffs would reduce total U.S. economic welfare by \$2.2 to \$2.9 billion annually (presumably for soybeans, sorghum, wheat, rice, feed grains, and rapeseed in aggregate). Chinese aggregate welfare would also fall between \$1.7 to \$3.4 billion annually, but Brazil would gain between \$1.5 and \$2.8 billion per year.

Chepeliev, Tyner, and van der Mensburgghe (2018) performed an analysis for the Farm Foundation on how U.S. Agriculture would fare under the proposed USMCA and retaliatory tariffs. They found that the proposed USMCA would increase U.S. agricultural exports by an estimated \$450 million, mostly because of increased U.S. access to Canadian dairy and poultry markets. However, they also estimated that the combination of retaliatory tariffs from China, Canada, Mexico, and other countries would cause total U.S. agricultural exports to decline by \$7.9 billion, including \$1.9 billion less agricultural exports to Mexico, and \$1.8 billion less agricultural exports to Canada. From the U.S. perspective, many of Mexico's Most Favored Nation (MFN) tariff rates on agricultural products are likely prohibitive. For example, the average Mexico MFN tariff rates are 71% for other meat, 35% for other food products, 31% for dairy products, and 29% for fruits and vegetables. If the USMCA is not ratified and the tariff rates for all three countries revert to MFN status of the WTO, U.S. agricultural exports could decline by more than \$9 billion annually. The authors conclude that "the retaliatory tariffs implemented by Canada and Mexico on U.S. agricultural exports will reverse the modest export gains from the USMCA – a decline of \$1.77 billion rather than a gain of \$450 million." (Chepeliev, Tyner, and van der Mensburgghe, 2018).

Market Facilitation Program and Related Assistance

On July 24, 2018, in response to retaliatory tariffs by other countries placed on U.S. agricultural products, the U.S. authorized up to \$12 billion in short-term relief for farmers hurt by the escalating trade war. On August 27, the USDA proposed three programs to assist agricultural producers to meet the costs of disrupted markets:

(1) USDA's Farm Service Agency (FSA) will administer the Market Facilitation Program (MFP) to provide payments to corn, cotton, dairy, hog, sorghum, soybean, and wheat producers starting September 4, 2018. An announcement about further payments will be made in the coming months, if warranted.

(2) USDA's Agricultural Marketing Service (AMS) will administer a Food Purchase and Distribution Program to purchase up to \$1.2 billion in commodities unfairly targeted by unjustified retaliation. USDA's Food and Nutrition Service (FNS) will distribute these commodities through nutrition assistance programs such as The Emergency Food Assistance Program (TEFAP) and child nutrition programs.

(3) Through the Foreign Agricultural Service's (FAS) Agricultural Trade Promotion Program (ATP), \$200 million will be made available to develop foreign markets for U.S. agricultural products. The program will help U.S. agricultural exporters identify and access new markets and help mitigate the adverse effects of other countries' restrictions. (USDA 2018, p.1)

The Market Facilitation Program (MFP) was established under authority of the Commodity Credit Corporation (CCC) and administered by the FSA. U.S. producers of cotton, corn, dairy (milk), pork (hogs), soybeans, sorghum, and wheat can apply for MFP assistance after the 2018 harvest is 100% complete. If eligible, they can report their entire 2018 production. An individual producer is eligible if the average adjusted gross income (AGI) for tax years 2014-2016 is less than \$900,000 and they comply with the provisions of the highly erodible land and wetland conservation regulations. The largest initial payments, by more than

an order of magnitude, will go to soybean producers totaling \$3.6 billion at a payment rate of \$1.65/bu. Other producers will receive initial payments totaling \$290 million for pork (\$8.00/head), \$277 million for cotton (\$0.06/lb), \$157 million for sorghum (\$0.86/bu), \$127 million for dairy (\$0.12/cwt), \$119 million for wheat (\$0.14/bu), and \$96 million for corn (\$0.01/bu). The initial \$4.7 billion from the MFP will be divided among individual producers, calculated by multiplying 50% of a producer's actual 2018 production by the applicable MFP rate. MFP payments are capped per legal entity at a combined \$125,000 for dairy or hogs. Payments for dairy production is based on the Margin Protection Program (MPP) for dairy (USDA, 2018).

Giri, Peterson, and Sharma (2018) used predictions from Zheng et al. (2018) and Taheripour and Tyner (2018) to estimate soybean revenue per acre across 14 states. They argued that, but for the 25% retaliatory tariffs imposed by China, the price of soybeans would have been \$8.80/bu on September 4, 2018 as opposed to the actual open price of \$8.46/bu on that day. The price difference of \$0.34/bu is much lower than the effective MFP payment rate for soybeans of \$0.825 (50% of \$1.65/bu). This suggests that if U.S. soybean producers receive the entire initial payment as promised, the MFP would more than make up for the price loss from Chinese retaliatory tariffs. The authors also found a similar result for sorghum. However, comparing FOB prices for soybeans and corn in Paranagua, Brazil with the Port of New Orleans, the same authors found that the MFP for soybeans and corn would not make up for the price loss from retaliatory tariffs. The latter results are an upper bound estimate of the tariff's impact, which should be viewed with caution as the authors do not account for historical differences in FOB prices at the two ports.

The Food Purchase and Distribution Program (FPDP) will purchase up to \$1.3 billion worth of various fruit, nuts, and legumes, along with beef, pork, dairy, sweet corn, rice, potatoes, orange juice, and peanut butter. Economic damages will be adjusted and spread over several months, based on orders placed by states through the nutrition assistance program. The FAS will administer the Agricultural Trade Promotion Program (ATP) to provide cost-share assistance to eligible U.S. organizations for activities such as advertising, sales, market research, and technical assistance up to \$200 million (USDA, 2018). However, as of November 19, 2018, only \$838 million had been paid out to farmers from the first \$6 billion in relief made available in September (Rappeport, 2018).

Conclusions and Other Considerations

In summary, the major provisions of the proposed USMCA increase the North American country of origin requirement for automobiles from 62.5% to 75% and specify that 45% of an automobile must be produced in factories where workers are paid at least \$16/hour, or it will not receive duty free access to North American markets. For agriculture, the largest impact of the USMCA would be increased U.S. access to Canadian dairy and poultry markets. Concessions under the USMCA would result in increased market access, above existing WTO levels, to over 12 million kg of additional U.S. agricultural products into Canadian markets. U.S. exports of dairy products to Canada would increase by an estimated 105% under the USMCA and U.S. exports of meat products to Canada would also increase by 12%. However, if the retaliatory tariffs implemented by Canada and Mexico remain in place for one year after the USMCA is implemented, U.S. agriculture would lose \$1.77 billion in total annual exports, instead of gaining \$450 million in annual exports of dairy and poultry to Canada. Furthermore, if current

retaliatory tariffs from China, Canada, Mexico, and all other countries remain in place for a year after the USMCA is implemented, total U.S. agricultural exports would decline by an estimated \$7.9 billion.

Even if the proposed USMCA is ratified and all retaliatory tariffs imposed on U.S. agriculture by all countries were removed, several tariff and non-tariff barriers to agricultural trade among the three countries would still exist, including the core system of Canadian supply management and U.S.-Mexico suspension agreements on sugar and tomatoes. The announcement of up to \$12 billion in relief for farmers seems to come with certain strings attached. While it is highly likely that the initial \$4.7 billion from the MFP will eventually make its way to farmers, it is not clear that the \$1.3 billion from the FDPD or \$200 million from the ATP will be paid in full if the retaliatory tariffs are lifted in the near future. For example, envision what would happen if all countries announced the elimination of all retaliatory tariffs on U.S. agricultural exports on January 11, 2019? The USDA would probably not follow through with its future nutrition or trade promotion assistance. Under such a scenario, it is also highly unlikely that a second round of MFP relief would not be forthcoming. This leads to the following question: Exactly how many months of losses from retaliatory tariffs is the announced \$12 billion in farmer assistance supposed to cover?

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