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China's Anti-Dumping Investigations Against U.S. Feed Products:

Lessons From the Trenches

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Despite clear mutual benefits of the U.S. exporting land- and water-intensive feed grains to China, China's imports of U.S. feed grains and products have been on a roller-coaster ride for over a decade. Among the trade disputes involving U.S. feed products were three anti-dumping investigations over the period 2010-2018 – two against U.S. dried distiller's grains with solubles (DDGS) and one against U.S. sorghum. Each of these three investigations was more aggressive than the last.

This paper reviews the three anti-dumping investigations China initiated on the imports of U.S. feed products over the last several years (Table 1). The paper provides a detailed description of how each investigation began, proceeded, and concluded. It discusses how the changing U.S.-China trade relationship and China's changing domestic politics affected the investigations, and how these disputes affected U.S. producers and importers in China. The paper also discusses lessons for marketing products to China given an unstable trade relationship, and implications for China's legal and political compatibility with WTO rules. The paper is drawn from the personal experiences of the author who has a long academic record of research on China's agricultural economy and trade, and was on the ground in China working on feed grain import issues during the period these investigations occurred.

Introduction

China and the U.S. have different resource endowments that underlie the potential for mutually-beneficial trade. China's endowment of arable land is roughly half of that in the U.S., while its population is roughly four times that of the United States, and therefore per-capita land

resources are roughly one eight those in the U.S. This has implications for feeding China's large population, particularly as the population grows more prosperous and consumes more animal proteins, the production of which relies on land-intensive grain for feed. China could import animal products but instead seeks to maintain domestic production of these products. China's advantage, of course, is labor-intensive industries, such as light manufactured goods, that can make use of China's large labor endowment and implied relatively low wages vis-à-vis land rents.[1] China's access to U.S. markets, and markets in other countries, has allowed the production and exports of labor-intensive manufactured goods to flourish in China.

The wealth generated by expanding industrial production in China contributes to growing demand for animal protein products. China's growing consumption of these products, and corresponding domestic production, strains China's ability to produce sufficient feed grains to meet rising demand. Because of this, when China began importing small amounts of U.S. DDGS in 2009, it was seen as a promising market for exports to expand. DDGS are a lucrative co-product of alcohol and ethanol production. Only small amounts of DDGS were produced by alcohol producers in the U.S., but as the U.S. ethanol industry expanded significantly over the 2000s, large amounts of DDGS came onto the market as a new feed ingredient. Initially vilified because the ethanol industry competed with the livestock industry for corn, then sought to sell the DDGS back to the livestock industry, it took some time for the livestock industry in the United States and globally to understand the benefits of DDGS in feed rations. By the late 2000s, however, several modern feed and livestock producers in China with the capacity to test and evaluate imported DDGS in feed rations found them to be a very useful and efficient

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[1] China's land rents are at or above rents in the United States, while wages for labor in China are well below those in the United States.

component in rations for swine, poultry, aquaculture, and dairy production, and demand for DDGS imports began to grow.

China's initial DDGS imports were viewed by many, both inside and outside China, as a promising potential trade flow. China's overall livestock production and feed demand is not known (Lohmar, 2015). Despite this, three things are clear, 1) China's meat consumption is growing as incomes and urbanization grow, 2) China's leaders favor domestic livestock production rather than importing livestock products, and 3) China's livestock industry is modernizing and leaders have supported this modernization for much of the past 20 years. Support for the growth and modernization of this industry, however, falters when the livestock industry could benefit from access to imported feed grains, for which China's leaders also hope to maintain self-sufficiency. Corn, in particular, is subject to a 7.2 million metric ton (MMT) tariff-rate quota (TRQ) that limits corn imports to that amount or less.[2] But DDGS, which hardly existed in the U.S. when China adopted the corn TRQ as part of their WTO accession agreement in 2001, did not face any such restrictions (until recent trade actions). As such, U.S. producers found a new, promising market for their products and feed and livestock producers in China found new supplies of a valuable feed ingredient.

The First Anti-dumping Investigation Against U.S. DDGS

By summer 2010, China was importing a substantial flow of U.S. DDGS of roughly 300,000 metric tons (MT)/month (Chart 1). At this pace, the impact imports had on the demand for domestic DDGS caught the attention of China's ethanol industry. With rising corn prices and

[2] 60 percent of China's corn TRQ isa allocated to state-trading enterprises (STEs) that can be instructed to leave money on the table and not import their entire TRQ allocation. As such, corn imports were in the 3-5 MMT/year range rather than the full 7.2 MMT expected in 2013-2016 when import margins were very profitable.

low fuel costs at the time, ethanol margins were being squeezed and increasing imports of U.S. DDGS were seen as a threat to the continued profitability of the industry, prompting 4 ethanol and alcohol producers in China to petition China's Ministry of Commerce to initiate an investigation into the dumping of U.S. DDGS (referred to as an anti-dumping investigation since, if the investigation finds that dumping has occurred, WTO rules allow the country to impose anti-dumping duties above their WTO bound tariff rates to counter the dumping margins found in the investigation.)

Anti-dumping investigations in China are carried out by the Trade Remedy and Investigation Bureau under the Ministry of Commerce (MOFCOM). Under WTO guidelines, the investigation and findings are to take up to one year, with an additional 6-months allowed as the maximum (GATT Article VI, 1994). The point of these investigations is to determine whether the exporting country is selling the product at issue for a price less than the costs of production, or selling it at prices below what the product sells for in their domestic or other foreign markets. During the investigation, the affected country can impose preliminary duties: a deposit paid by importers under the expectation that anti-dumping duties will ultimately be imposed and, if not, the importers can get the deposit back (or if the actual duties are below the preliminary duties, importers can get the difference back). The threat of preliminary duties capped the growth of U.S. DDGS exports to China as exporters and importers maintained a limited pipeline of DDGS in case preliminary duties were imposed.

China's domestic feed and livestock industry, led by the China Feed Industry Association (CFIA) and several prominent feed companies, openly advocated for not imposing duties. The

industry argued that imposing duties would benefit the fuel industry (ethanol producers) over the interests of the food industry. This was especially clear at a hearing on the issue held by MOFCOM in July 2011, where several large feed companies that used DDGS presented and the audience was filled with employees from these companies who broke into raucous applause when the speakers made salient points. By December 2011, a year had passed without any duties imposed, and MOFCOM extended the investigation for another 6 months. On June 22, 2012, days before the end of the extension, MOFCOM quietly announced that the petition to investigate U.S. DDGS for dumping had been withdrawn on May 10th, and MOFCOM had decided to accept the withdrawal, end the investigation, and no duties would be imposed. As a trade lawyer told me later regarding the withdrawal of the petition, "That never happens!"

This first salvo in what would become a much more contentious trade relationship in feed ingredients was instructive for several reasons. One, it demonstrated that at that time, private industries and the industry associations ostensibly representing their interests, felt comfortable standing up for their interests in the face of an investigation from MOFCOM. Moreover, the leadership in China was also willing to listen to both sides of the story and take into consideration the perspective of the importers and users of imported DDGS, not just the domestic DDGS producers. The incl;sion of domestic end users in the deliberations is not required under WTO AD investigation guidelines (GATT Article VI). Nor is taking "the public interest" into consideration, but this is part of the consideration under China's AD regulations (Yu, 2005). Thus, China's domestic feed and livestock industry advocating its interests which ultimately resulted in the case ending without duties imposed is a progressive component to

China's anti-dumping regulations. Also during this time, many academics and others argued that importing feed ingredients was "good for China" by saving scarce land and water.

Tense Interim Period

The period between the first AD investigation into U.S. DDGS and the second investigation was not smooth sailing for U.S. DDGS exports by any stretch of the imagination. Indeed, while U.S. DDGS exports to China increased to once again become the largest export market by the end of 2013, exports were driven down to near zero again by the end of 2014 due to a dispute over an unapproved genetically-engineered (GE) trait in U.S. corn called MIR162.[3] While the proteins expressed by GE traits that are used to detect those traits (and are also the primary concern for food/feed safety, etc.) are broken down in the process of making ethanol, distinct components of the proteins can be detected, therefore DDGS can also be tested for the presence of unapproved GE traits. Unlike corn, however, DDGS is not a seed so cannot be planted, nor is DDGS used in any human food products, only as animal feed. These two differences between corn and DDGS should eliminate concerns that the engineered genetics would somehow get into the domestic corn supply or cause unintended health consequences when consumed by humans. Because of this, the benefits from regulating DDGS for unapproved traits are not so clear as they are for corn. Despite that, many in China argued that DDGS should be regulated the same as corn, out of an abundance of caution.

Because it was not clear whether, how, or why U.S. DDGS imports should be tested for the presence of unapproved GE traits, and such testing was time consuming and disruptive to the day-to-day functioning of the ports, the testing was somewhat haphazard and varied from port to

[3] This itself was a major disruption to U.S. corn exports but is not addressed in this paper.

port. About half of the DDGS imports at that time were arriving in containers, and containers that tested positive were often simply held at the port with the hope that MIR162 would be approved soon. But this caused a build up of containers in some ports, particularly ones that were testing more aggressively than others. By summer 2014, the problems with DDGS imports testing positive for MIR162 were mounting, so China stopped giving permits to import U.S. DDGS in June 2014. This was followed by a directive in July 2014, that U.S. DDGS destined for China needed to obtain an official certificate that they are free of unapproved traits *before* leaving the U.S.

The directive requiring DDGS exporters to provide official, U.S. government certification that the product is free of MIR163, a technology approved for use in the U.S. and many other countries for more than 4 years, created a whole new set of problems beyond the scope of this paper that ultimately resulted in DDGS exports to China reaching a low point of less than 5,000 MT in November, 2014 (Chart 1).

MIR162 was finally approved for import in December 2014, which resolved all the testing issues, and DDGS exports began to take off, yet again (unlike corn exports, which did not rebound). By May 2015, they had surged to nearly 1 million MT/month and stayed at that pace through July. While corn prices in China remained high under a price support program, soybean meal prices in China softened considerably over this period, from roughly RMB 3500/MT, to close to RMB 2500/MT. DDGS have a higher protein content than corn, although not as high as soybean meal, but their protein content makes them sensitive to soybean meal prices as well as corn prices. The record high DDGS import pace and falling soybean meal prices conspired to push down China's domestic DDGS price, which narrowed the import margin.

The Second Anti-dumping Investigation Against U.S. DDGS

The surge in DDGS imports in 2015 after approval of MIR162, and subsequent softening of DDGS prices in China, resulted in a second anti-dumping investigation initiated by MOFCOM in January 2016. This time petitioners not only requested MOFCOM to investigate dumping, but also the role that U.S government subsidies played in lowering U.S. DDGS prices, which if found, would enable China to impose countervailing duties in addition to anti-dumping duties (abbreviated as AD/CVD for anti-dumping and countervailing duties). Recall that the earlier investigation did not end with a finding of no dumping, but rather the initial petition from alcohol and ethanol producers requesting MOFCOM to investigate was simply withdrawn by the petitioners.

From the beginning, this investigation was different from the earlier one. In meetings with China's Feed Industry Association, which vocally opposed the earlier investigation, it was surprising to find that they did not oppose this investigation, claiming that MOFCOM had found dumping in the earlier investigation and decided not to pursue duties, but now is following through. China's leading feed and livestock companies, nearly all of which are private enterprises, major importers of DDGS, and vocally opposed to the investigation in 2010-12, also did not vocally oppose the 2016 investigation, although many privately hoped the investigation would end without imposing duties. As one senior manager of a prominent feed and livestock company told me at the time, "We hope they don't impose duties, but if they do, and everyone in China needs to pay them, then we can still compete." Others expressed optimism that no duties would be imposed because, as I heard many times from importers in China, "There is no dumping."

While China's feed and livestock industry did not fight the imposition of duties on U.S. DDGS, industry stakeholders did privately hope duties would be either not imposed or, if imposed, low enough to allow the trade to continue. The final duties, however, were well above expectations. Interestingly, the higher-than-expected duties were progressively imposed in tandem with trade-related actions against China made by the Obama administration in late 2016. For example, on September 13, 2016, the Obama administration filed a complaint at the WTO charging that China's subsidies to corn, wheat, and rice producers exceeded their WTO commitment levels and the resulting excess production reduced export opportunities for U.S. producers of those products. Ten days later, on September 23rd, MOFCOM announced preliminary duties on U.S. DDGS of 33.8 percent, which was at the high end of the range that the industry was hoping for (many stated that duties of 15-30 percent would still allow for some imports). At that tariff rate, U.S. DDGS exports to China would be significantly reduced, but probably not entirely eliminated. However, the Obama administration filed a second WTO complaint on December 15, 2016 on China's tariff-rate quota (TRQ) administration for the same agricultural products: wheat, corn, and rice.

The trade action that probably caused the most resentment among China's leadership, however, is the decision to continue "non-market economy" (NME) status under the WTO. China was admitted to the WTO on December 11, 2001, with NME status that would be reviewed after 15 years, and MOFCOM expected its removal at the 15-year mark. However, when the 15-year mark came up on December 11, 2016, the Obama administration did not remove China's NME status, so it continued.[4] NME-status has implications for any anti-dumping investigation against China in that, as an NME, prices used to estimate production costs

[4] Nor did the EU nor other major trading partners remove NME status for China, for what it is worth.

and domestic sales can be assumed to not reflect true market prices, so investigators can use prices from other countries as a proxy. This practice can be, and apparently often is, abused to determine high "dumping" margins that can then justify high anti-dumping tariffs against producers in China. China has been on the receiving end of more anti-dumping investigations than any other country, particularly from the United States (Shiavo, Tomasi, and Zhu, 2020). This is in part because of the prominent role of state-owned enterprises, which can sell product under cost because there is no investor oversight, but also due to NME status that makes it easier to find dumping margins and defend those findings at the WTO.

With these two events occurring in December, 2016, it was not a big surprise when, on January 11, 2017, exactly one-year after the investigation was initiated, that China not only found dumping and subsidies, but levied final duties well above the preliminary duties imposed the previous September. The final duties ranged from 42.2 to 53.7 percent for dumping, and an additional 11.2-12 percent for subsidies, which added up to levels well beyond the preliminary duties (33.8 percent) and high enough to make DDGS exports entirely unprofitable.[5] These duties all but entirely cut off imports of U.S. DDGS and have remained in place despite even the easing of imports under the Phase One agreement reached in January 2020.

This paper does not discuss the merits of China's final determination and subsequent imposition of duties other than to make the following points. There is no reason why the U.S. ethanol industry would seek to dump DDGS in China, particularly if it damages China's domestic ethanol industry. Indeed, the U.S. ethanol industry, supported by U.S. corn growers, promote ethanol use and production worldwide, with a particularly large program to promote the

[5] Different companies received somewhat different duties depending on the extent to which they were deemed "complaint" with the investigation and also the levels of subsides they received, some of which were state level tax breaks.

development of the ethanol industry in China costing millions of dollars that was underway at this very time. In addition, ethanol producers in the United States sell their DDGS either directly to U.S. feed and livestock producers, or to traders who then resell them to end users in the U.S. or export them to importers and end users in other countries. Thus, nearly all U.S. DDGS exports to China came from traders, not the ethanol producers themselves. Traders have no incentive to sell large volumes of U.S. DDGS to customers in China at prices below what they can fetch in the United States or other countries.

The surge in China's DDGS imports in 2015 was largely induced by the pent-up demand that occurred from the MIR162 restrictions the previous year, along with strong import margins in the first half of the year that diminished as imports increased over the summer. Nevertheless, the surge provided strong support for a dumping investigation.[6] Why the China Feed Industry Association (CFIA) and prominent feed companies did not challenge this investigation and try to maintain access to DDGS supplies from the U.S., as they did in the previous investigation, is anyone's guess. It is very unusual for stakeholders of an industry that uses imported products as an input to the production of other goods to complain about the dumping of that input: if the product is actually being sold at below production costs or below the price that it fetches in other markets, then this is a direct and profitable benefit to the industry importing it. The issue became more of a national cause to address perceived U.S. transgressions that everyone in China must support, regardless of whether they benefit or not. How this came about, and whether there was any coordination by government or party officials, we will never know. It did, however, help

[6] A prominent stakeholder who briefed USTR Ambassador and experienced trade lawyer Robert Lighthizer on the investigation and duties, told me that Ambassador Lighthizer asked about imports, and when he was told about the surge in imports he said, referring to the subsequent investigation, "That's what I would have done."

reduce debate over whether such duties were in the "public interest," a progressive component of China's antidumping regulations.

Trade tensions rise further!

The election of Donald trump in 2016 brought a new approach to addressing trade issues. On his 3rd day in office, President Trump summarily pulled the U.S. out of the Trans-Pacific Partnership (TPP). The TPP was a progressive trade treaty that was widely expected to influence the multilateral trading rules of the future, and President Trump's withdrawal signaled in no uncertain terms his frustration with multilateral agreements and intention to instead negotiate one-on-one with trading partners. Of course, the number one trading partner on everyone's mind was China.

The U.S.-China relationship started civilly with a formal meeting between President Trump and China's President Xi at President Trumps private club in Florida in April, 2017. The visit resulted in a commitment to develop a trade deal in the next 100 days, and markets were buoyed by this news. President Xi's visit to Florida was followed by China's chief economic negotiator Vice Premier Liu He's visit to the oval office in May, where he shook hands with President Trump and the two countries agreed to look into opening up respective agricultural markets: China opens up to U.S. beef, and the U.S. will open up to China's cooked chicken products (this deal had been in the works for over a decade but never got done for various reasons). The goodwill apparently had an impact. After railing against China as a currency manipulator whose actions cost U.S. jobs during the campaign, the Trump administration declined the opportunity to label China a currency manipulator shortly after President Xi's visit in 2017, and China made some large purchases of U.S. corn.

During and just after the 100-day period, however, the U.S. initiated a series of investigations that would ultimately justify trade interventions. In April 2017, the U.S. self-initiated two investigations under Section 232 of the Trade Expansion Act of 1962 to determine whether U.S. imports of steel and aluminum posed a threat to national security. In May and June 2017, U.S. industry groups petitioned the U.S. International Trade Commission (USITC) to investigate whether the rapid and large rise in washing machine and solar panel exports to the U.S. damaged the U.S. domestic industries in these products under Section 201 of the Trade Act of 1974. The above investigations were not China-specific, but their findings and the U.S. actions based on those findings ultimately resulted in the first stages on the bilateral trade tensions, often referred to as a "trade war," the following year.

In August 2017, the Trump administration self-initiated a China-specific investigation into whether China's intellectual property policies and practices caused economic damages to the U.S., which could result in trade actions under Section 301 of the 1974 Trade Act. The tariff disputes that came to the fore in the summer of 2018 were the main components of the bilateral trade tensions that would last until January 2020. The duties ultimately imposed as a result of these investigations, as well as the retaliatory duties imposed by China in response to the U.S. duties, became known as the "232 tariffs" and the "301 tariffs." China responded to the U.S. 201 duties, however, with an AD/CVD investigation on U.S. sorghum.

The 3rd AD Investigation: U.S. Sorghum Caught Up in the Mix

While U.S. exports of corn and DDGS faced multiple disruptions and roadblocks in the year leading up to the trade war, U.S sorghum exports to China had been a huge success story. Starting in 2013, before the MIR162 rejections of U.S. corn occurred, the U.S. grain and

sorghum industry started promoting U.S. sorghum in China as an alternative to corn. Sorghum can be used as a substitute for corn in livestock feed and sorghum imports are not constrained by a TRQ like corn is, which requires end users in the feed and livestock industries to hold a TRQ allocation from the government before importing corn. U.S. sorghum also does not contain any genetically engineered traits, which was an additional advantage for sorghum after the MIR162 rejections.

With China's corn prices held high under a price support program, importers in China quickly began purchasing nearly all U.S. sorghum that was readily available for export. China purchased almost no U.S. sorghum before 2013 (Chart 2). But in the 2013/14 sorghum marketing year, U.S. sorghum exports to China rose to over 4.3 MMT, and then to over 8.3 MMT in the 2014/15 marketing year, roughly 75 percent of U.S. sorghum production in the 2014/15 crop year. China's imports of U.S. sorghum continued at roughly 50 percent of U.S. sorghum production after that. Because of China's corn price support program and high corn prices, demand from China was able to drive up U.S. sorghum prices to levels above U.S. corn prices for much of the period 2013-2018, something that never occurred before. This caused feed mills and ethanol plants in U.S. sorghum production regions, which typically use both corn and sorghum, to replace sorghum with corn, and freed up sorghum for export to China.

As the U.S.-China 100-day deal passed and the goodwill generated by the meetings between leaders of the two countries in Spring of 2017 waned, trade tensions began to take hold and U.S. sorghum got caught up in the mix. On January 22nd, 2018, the Trump administration announced safeguard tariffs on washing machine and solar panel imports based on the findings of the 201 report. While these tariffs were not China-specific they did appear to prompt China's

investigation into the dumping of, and subsidies for, U.S. sorghum, announced on February 5th, 2018.

China's AD/CV investigation against U.S. sorghum, and the process of that action, was exceedingly costly and yet, short lived. The investigation came as a surprise to many, although there had been rumors of such an investigation was under consideration for months. An early part of AD investigations is the individual enterprises from the industry in the exporting country respond to a list of requested information that often includes detailed production information to estimate production costs and the role of subsidies, and based on these responses the enterprises are deemed "compliant" or "non-compliant". China's investigation was no different, indeed many considered excessive, but the China market was so important to U.S. sorghum producers that they were willing to comply as best they could. In the case of DDGS however, only around 70 ethanol plants had the capacity to export DDGS when the 2nd AD investigation was initiated in 2016. The U.S. sorghum industry, in contrast, has roughly 50,000 sorghum producing farms that needed to submit detailed production information, and these submissions needed to occur in just two weeks from the publication of the list of information to be included in the submission. The legal and logistical costs of this effort was extremely high for the U.S. sorghum industry, but because China had become such an important customer, the U.S. industry was willing to bear the costs. Indeed, the United Sorghum Checkoff Program estimated sales to the China market in years 2013-2015 alone added 160 million dollars to U.S. sorghum producers' sales, far beyond the costs of compliance with the AD/CVD investigation.

On February 16, 2018, less than two weeks after the sorghum AD/CV investigation was announced, the U.S. released the findings of the 232 investigation, which concluded that steel and aluminum imports threatened U.S. national security, and the Trump administration

announced that it would impose 25 percent duties on imported steel and 10 percent duties on imported aluminum starting March 23, 2018. Initially 7 countries would be exempted, a list that seemed to keep changing, but it never included China. On March 22, 2018, the USTR came out with its section 301 report on the cost to U.S. industry of China's intellectual property right infringements, which concluded that there was significant infringement and cost to U.S. industry, followed by an announcement to impose duties on $50 billion of U.S. imports from China on April 3. China immediately countered, on April 4th, with an announcement of equivalent tariffs on $50 billion of U.S. exports to China, and it requested consultation with the United States under the WTO regarding the tariffs imposed as a result of the 301 report. The U.S. replied to the request for consultation on April 13, within the required 10 days to respond under the WTO Dispute Settlement Understanding (DSU). In its reply, the U.S. stated it did not believe China's April 4th letter satisfied the requirements to force consultation under the DSU, but nonetheless was willing to enter into consultations.

On April 17th, China announced preliminary AD/CV duties on U.S. sorghum of 178.6 percent. The preliminary duties were imposed just 2-1/2 months after the investigation was initiated. This compares to roughly 8 months between the start of the investigation and the imposition of preliminary duties in the 2nd DDGS AD/CVD case, which is a more typical stretch between the start of an investigation and the imposition of preliminary duties. The duties were also high beyond the wildest expectation, and that caused extreme stress among the many importers with shipments on the way (see below).

The preliminary duties on sorghum were imposed quickly, and they were also removed quickly. By early May there was a period of détente between the two countries, with a high-level delegation from the U.S., including the Treasury Secretary, the Commerce Secretary, the

U.S. Trade Representative and other U.S. trade officials, traveling to Beijing the first week of May, followed by a delegation from China led by Vice-Premier Liu He traveling to Washington in mid-May. It was at the conclusion of Liu He's trip to the United States, May 17, exactly one month after the duties were imposed, that China announced it was canceling the investigation and the duties will no longer be imposed. China also made large purchases of U.S. corn at this time. There was a sense that a more drawn-out trade war might be averted.

This short, sharp, shock to the sorghum market did significant economic damage to sorghum traders, mostly importers in China. After the February announcement of an investigation, the market expected preliminary duties may be imposed eventually, but likely after 6 months or more. Importers therefore accelerated shipments of purchases they already had on the books in order to import their sorghum contracts before any duties were imposed. By April, when the duties were imposed, there were an estimated 25 panamax sized (60,000 MT) bulk shipments of U.S. sorghum on the water headed for China (this represents 1.5 MMT of sorghum, over 35 percent of the 4.2 MMT of U.S. sorghum imported by China in the 2017/18 crop marketing year). Each of these shipments held roughly $12 million in U.S. sorghum and, if landed in China after the preliminary duties were imposed, the importers would have had to provide customs authorities with a roughly $23 million check just to unload. Nearly all these shipments were somehow unwound – either sold to customers in other countries or back to the supplier, at great cost to the importer – and never made it to China. The end users in China also had to scramble to find alternative feed supplies upon realizing these shipments would not arrive. If importers had any clue that the duties would be removed so quickly, they could have slowed down their shipments and brought them into China after paying only the demurrage costs.

Producers and sorghum traders in the U.S. also lost as sorghum prices fell roughly 5 percent at U.S. ports after the preliminary duties were announced.[7]

Sorghum exports to China did not immediately recover from this shock. While some sorghum shipments arrived in late May and in June, importers were hit hard by the AD investigation and were very wary of making additional purchases of U.S. sorghum. Their concerns were well-founded, in early July the U.S. imposed duties on $50 billion of imports from China justified by the 301 report, and China countered the next day with duties on $50 billion of U.S. exports to China, a list that included sorghum along with many other agricultural products (such as corn, DDGS, and soybeans). These actions cut off U.S. sorghum exports to China until the Phase One agreement between the two countries was reached in January, 2020.

Conclusion and Lessons Learned,

The three AD cases China initiated against U.S. feed products described in this paper are complex and have multiple implications. Among them is that each investigation was shorter, harsher, and therefore more aggressive than the last, and took place over a period of deteriorating trade relations, particularly the last two. While it may be coincidental that the 2nd AD investigation on U.S. DDGS – a product that MOFCOM had already carried out a dumping investigation on and therefore was relatively prepared to pursue and conclude within a year – was timed to not only coincide with a U.S. presidential election that was sure to raise questions about the trade relationship with China (and ultimately did so), and also the date for which the U.S. (and China's other trade partners) were expected to declare China a Market Economy, the

[7] Despite the loss of their most important market, U.S. sorghum prices did not fall much because sorghum competes with corn in livestock and ethanol production once sorghum prices fall to 95 percent of corn prices, and that prevents sorghum prices from falling below corn prices. Indeed, U.S. sorghum prices at the time were just above corn prices due to strong exports to China.

high duties ultimately imposed were widely believed to be influenced by not only those two factors but also two WTO disputes filed by the United State against China's agricultural and trade policies in the months before the final determination was announced. The rapid and very destructive AD case against U.S. sorghum, however, seemed much more likely timed to occur in tandem with the U.S. announcement of duties justified by the various reports initiated in the previous year.

The petition requesting the first case against U.S. DDGS was ultimately withdrawn, an action that rarely occurs in AD investigations, and this was widely believed to be due to the resistance from China's feed and livestock industry. Eliciting feedback from domestic end users of imports subject to an AD investigation is not part of WTO AD guidelines as described in GATT Article VI 1994. Instead, it is part of China's own anti-dumping regulations that stipulate that anti-dumping duties must comply with the public interest (Yu, 2005). Indeed, a violation of public interest was the justification MOFCOM used when it summarily removed the very large AD duties on U.S. sorghum one month after they were imposed and cancelled the investigation entirely. This is a progressive component of China's WTO regulations that should be considered for adoption worldwide.

Finally, GATT Article VI does not consider motive, only whether there is evidence of dumping and injury to the industry in the importing country. This is unfortunate since, in all three of these cases, the exports to China came from private traders who purchased DDGS or sorghum from ethanol plants or farms and sold them on the market for the best price they could obtain. If investigators were compelled to determine a motive for why a country might be dumping product into a foreign market, they would be very hard pressed to find such in these cases. I expect that would be true for many anti-dumping investigations worldwide.

China would likely support efforts to reform the WTO AD guidelines to include language that requires plaintiffs to demonstrate motive: why would producers in one country seek to sell their products to another country at below market value? As the number one country on the defending end of AD investigations worldwide, China should benefit from this more stringent standard for determining whether dumping occurred or not. This is particularly true for China as the current standard is simply to show that products were sold below normal value, which for China can be manipulated because of their NME status.

U.S. marketing practices helped to prompt these three investigation, assisted in their resolution, and also helped U.S. exporters manage the outcome. The U.S. has a unique set of marketing institutions called USDA cooperators that are non-profit industry associations funded by producer associations and charged with identifying and developing foreign markets for U.S. agricultural products using funds from USDA's Market Access Program, and Foreign Market Development program. In the cases of both U.S. DDGS and U.S. sorghum, China's initial introduction to these products was facilitated by U.S. Grains Council activities, as was their expanded use in feed rations. The U.S. Grains Council has offices all over the world and is the USDA cooperator charged with expanding exports of corn, sorghum, barley, DDGS and ethanol. Extensive programming with animal nutritionists traveling to China for seminars and workshops with feed and livestock companies helped to introduce and expand the use of both DDSGS and sorghum. Such efforts were so successful that the U.S. Grains Council pulled back on both DDGS and sorghum promotion activities after a few years when it became clear that imports had grown so much that the main constraint to additional imports was not demand for the products, but rather exportable supplies in the U.S.

When the AD cases were initiated, the U.S. Grains Council served as a central point to coordinate the industry's response to the investigation. While the Grains Council could not pay any of the legal fees directly, it did help coordinate a fund for the industry to collectively pay for legal council, and worked with the individual industry stakeholders to comply with the investigation. The experience gained from the first two AD investigations against U.S. DDGS was put to the test when the accelerated AD investigation into U.S. sorghum was announced, along with its extremely complex requirement to get responses from all 50,000 U.S. sorghum producers on their production costs, sales, and subsidies received.

Finally, with offices all over the world, the U.S. Grains Council played a key role in managing the diversion of exports when duties were announced on DDGS in 2017, and on sorghum in 2018. China was by far the number one export market for U.S. DDGS when the duties were announced in January, 2017, and the Grains Council redoubled efforts worldwide to find new export markets with countries as diverse as Mexico, Columbia, Egypt, Turkey, Indonesia, South Korea, and Vietnam all taking larger imports as China's imports were reduced to a trickle. U.S. DDGS exports in year 2017 were down only 2.5 percent from 2016 exports. The Grains Council also worked to find buyers for the many sorghum shipments that were on their way to China when the high AD preliminary duties were announced in April, 2018.

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Table 1. Three Anti-dumping Investigations into U.S. Feed Products by China

Action	Dates	Result	Consequences
AD1 - Investigation into dumping of U.S. DDGS	December 2010 to June 2012	The petition requesting the investigation was withdrawn by the ethnaol industry	U.S. DDGS export growth contained during the investigation, but no lasting consequences
AD2 - Investigation into dumping of and subsides for U.S. DDGS	January 2016 to January 2017	AD/CVD duties of roughly 68 percent were imposed	U.S. DDGS exports to China, the number one market for several years, all but stopped entirely and duties are still in place
AD3 - Investigation into dumping of and subsidies for U.S. sorghum	February 2018 to May 2018	Preliminary duties of 176.8 percent were imposed in April, and the investigation was canceled and duties removed in May 2018	Costly disruption to record flow of shipments to China causing significant losses, primarily for importers

Chart 1. Monthly U.S. DDGS Exports to China: 2009-2021

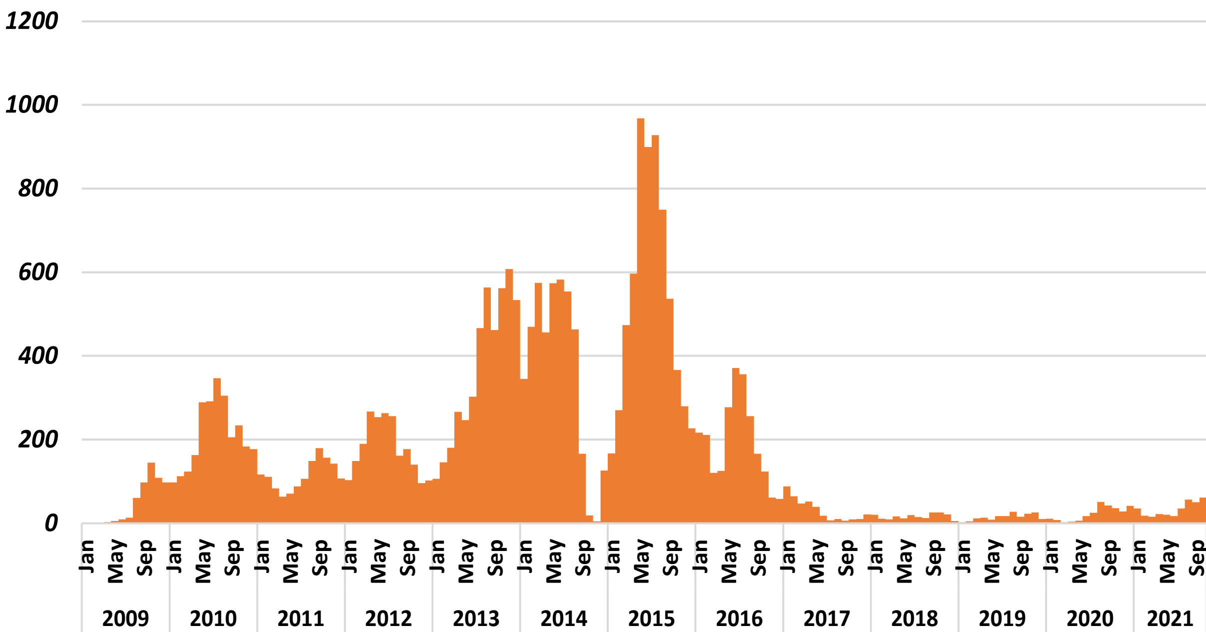

Chart 2. Monthly U.S. Sorghum Exports to China: 2009-2021