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A Short Introduction to the Distillers' Dried Grains Export Market

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Market Report	Year Ago	4 Wks Ago	2-3-17
Livestock and Products, Weekly Average			
Nebraska Slaughter Steers, 35-65% Choice, Live Weight.	132.00	117.97	118.56
Nebraska Feeder Steers, Med. & Large Frame, 550-600 lb.	198.24	155.15	157.84
Nebraska Feeder Steers, Med. & Large Frame 750-800 lb.	165.76	137.84	130.53
Choice Boxed Beef, 600-750 lb. Carcass.	226.24	201.84	192.88
Western Corn Belt Base Hog Price Carcass, Negotiated	51.55	57.97	NA
Pork Carcass Cutout, 185 lb. Carcass 51-52% Lean.	69.65	79.12	83.53
Slaughter Lambs, wooled and shorn, 135-165 lb. National.	143.71	141.36	139.75
National Carcass Lamb Cutout FOB.	359.79	347.30	336.91
Crops, Daily Spot Prices			
Wheat, No. 1, H.W. Imperial, bu.	3.93	2.97	2.98
Corn, No. 2, Yellow **Columbus**, bu.	3.33	3.17	3.21
Soybeans, No. 1, Yellow **Columbus,** bu.	8.21	9.10	9.37
Grain Sorghum, No.2, Yellow Dorchester, cwt.	5.48	4.82	5.07
Oats, No. 2, Heavy Minneapolis, Mn, bu.	2.66	2.88	3.14
Feed			
Alfalfa, Large Square Bales, Good to Premium, RFV 160-185 Northeast Nebraska, ton.	250.00	NA	147.50
Alfalfa, Large Rounds, Good Platte Valley, ton.	82.50	70.00	65.00
Grass Hay, Large Rounds, Good Nebraska, ton.	85.00	65.00	65.00
Dried Distillers Grains, 10% Moisture Nebraska Average.	134.50	110.00	105.00
Wet Distillers Grains, 65-70% Moisture Nebraska Average.	51.50	43.50	43.25

*** No Market**

Distillers' Dried Grains with Soluble (DDGS) is a co-product from ethanol production which can be used as an alternative feedstuff in livestock rations. Ethanol, and consequently DDGS, production has increased dramatically since 2000. Ethanol production increased by 12.9 billion gallons, a 760% increase between 2000 and 2015, with the majority of this increase after 2007. This increase in ethanol production contributed to an increase of over 37.75 million tons in DDGS production, or 1,646% between 2000 and 2015. In 2015, the United States produced about 40.23 million tons of DDGS (USDA ERS Database 2015). Of this total DDGS production, approximately 66% of DDGS were consumed domestically while the remaining 34% was exported. U.S. Exports of DDGS have also been increasing. Between 2000 and 2015, U.S. DDGS exports increased by 12.94 million tons, a 1,439% increase. Just between 2014 and 2015 U.S. exports increased approximately 2 million tons, a 17.3% increase. In 2015, the United States delivered DDGS to 46 countries around the world compared to only 22 countries in 2000 (UN Comtrade Database 2015).

The United States was the largest exporter of DDGS in the world in 2015, exporting 13.84 million tons representing 82.8% of the total world exports (Figure 1). The second largest exporter in 2015 was Canada, exporting only 0.54 million tons, 3.2% of the world exports. China was the largest importer of DDGS in 2015, importing 7.52 million tons representing 45.1% of total world imports, followed by Mexico importing 1.73 million tons, 10.4% of the world exports (Figure 2) (UN Comtrade Database 2015).

China is currently the largest importer of DDGS; however, the development of the market did not take off until after about 2008 (Figure 3). The DDGS import

market in China has grown exponentially, from 1,560 tons in 2000 to 7.52 million tons in 2015, driven by the demand for food (UN Comtrade Database 2015). As China's demand for animal proteins increased, demand for livestock feed products has increased as well causing China to become a net importer of animal feed grains, including DDGS (Fabiosa et al. 2009).

China's domestic policies can have a large impact on DDGS imports. Bans on shipments, antidumping investigations, quality requirements, and uneven regulations for inspection and quarantine are only some of the features that illustrate the uncertainty surrounding trade with China (Gale, Hansen and Jewison 2015). In the mid-1990s for example, China cut tariffs and eliminated the value-added tax on imports of soybean meal, DDGS and other grain-milling by-products to address the deficit in raw feed materials. By the end of the 1990s, the tariff on soybeans was also reduced to 3% and quotas were eliminated on imports of soybeans. In 2014, China began increasing price supports annually (USDA 2016). Even with these changes, the importers turned to cheaper feeding alternatives compared to corn and soybeans such as DDGS, barley and sorghum (Gale 2015).

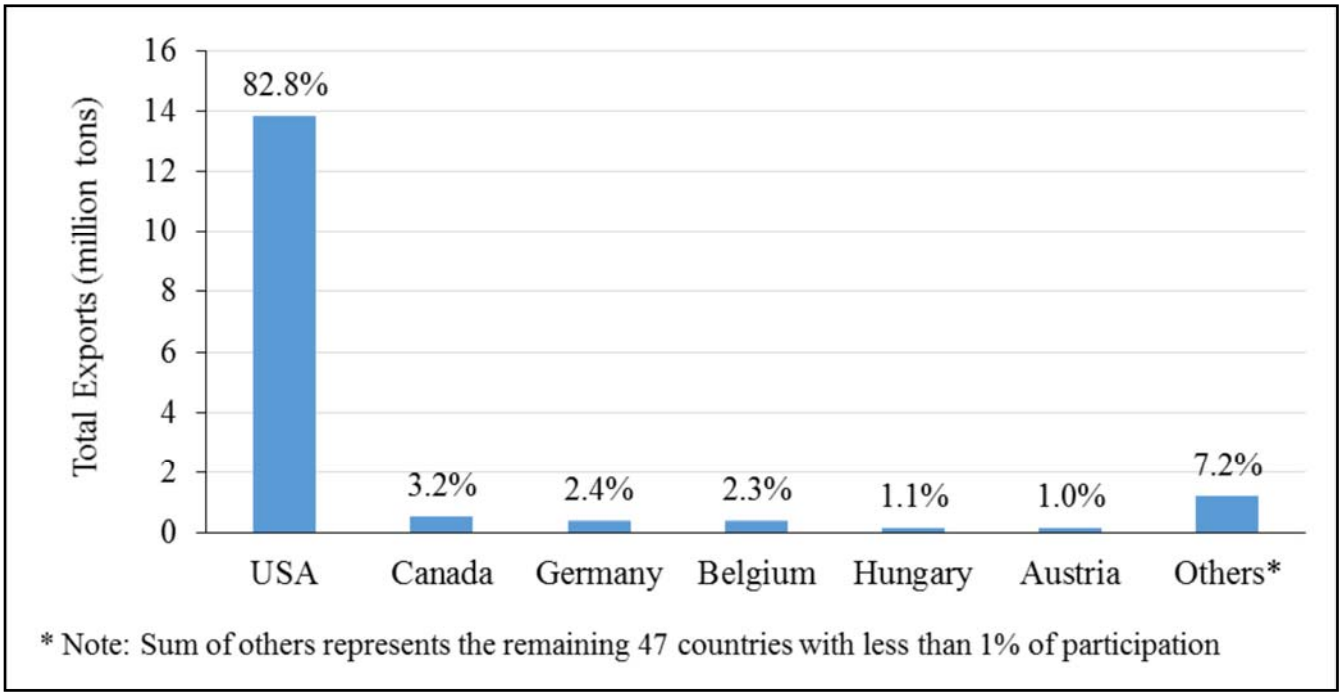
A closer look into the U.S. export market, shows that China imported 6.94 million tons (53%) of U.S. DDGS exports in 2015, which represents about 92% of China's total imports (Figure 3). China became the top importer of U.S. DDGS in 2010 (UN Comtrade Database 2015). In late 2010, China started an anti-dumping investigation into U.S. DDGS imports that continued until it was dropped in mid-2012. During this investigation, China's imports slowed down (Shuping and Stanway 2015). In 2011, Mexico overtook China as the top U.S. DDGS importer, however in the next year (2012) China regained the lead as the top importer and remains in this position (Worledge 2015).

Figure 4 illustrates the monthly volatility of the U.S. DDGS exports to China. While the trend for yearly U.S. DDGS exports to China has been increasing, volatility exists and can be seen from the monthly chart. In 2013, China tested and detected the presence of MIR 162 (a genetically modified trait) in U.S. corn, causing rejection of U.S. corn shipments by early January 2014. After this event, U.S. DDGS shipments were tested for genetically modified traits and rejected, which caused volatility in China's imports of U.S. DDGS imports (Roberts et. al. 2015). In July 2013, China started requiring a "GMO test report" for U.S. DDGS plus an official U.S. government stamp to certify that DDGS did not contain genetically modified material. In 2014, DDGS were particularly affected by these trade restrictions and by October of that year, U.S. DDGS exports to China were nonexistent. Later in 2014, GMO corn was approved by China and shipments of U.S. DDGS began again in 2015 (Hirtzer 2015). By May 2015, the monthly U.S. DDGS exports to China reached the highest level exporting 1,066 tons (US Census Database 2016). Following record high monthly exports in May, June and July of 2015, U.S. DDGS exports to China began to fall. Between July 2015 and March 2016 monthly DDGS exports fell 87% (US Census Database 2016). This sharp decline in exports was as a result of an investigation by the Chinese Ministry of Commerce, compelled by Chinese DDGS producers' claims of unfair U.S. subsidies. Importers were fearful about anti-dumping and countervailing duties being imposed on U.S. DDGS (IFBF Research and Commodity Services 2016). Beginning in September 2016, China imposed anti-dumping duties of 33.8% on U.S. DDGS and anti-subsidy duties ranging from 10% to 10.7% (Shuping 2016). In January of 2017, China announced that new anti-dumping duties would be from 42.2% to 53.7% while anti-subsidy duties would range from 11.2% to 12% (Mason 2017).

Continued expansion of DDGS exports to China will be a challenge to the United States in 2017, especially with China's decision to end the minimal price policy added to the anti-dumping and anti-subsidy duties. The minimal price policy supports corn producers in China increasing corn stocks and reducing domestic corn demand. Currently, China still requires certification that DDGS and corn do not contain genetically modified material, and continues imposing a combination of import restraints (e.g. quotas, licensing, minimum prices and duties) (USTR 2017; Gale, Hansen and Jewison 2015). Even with all of the concern about DDGS exports to China, the United States has been adapting new strategies of diversification to other markets and continued expansion, especially to Mexico (the second largest importer) (IFBF Research and Commodity Services 2016).

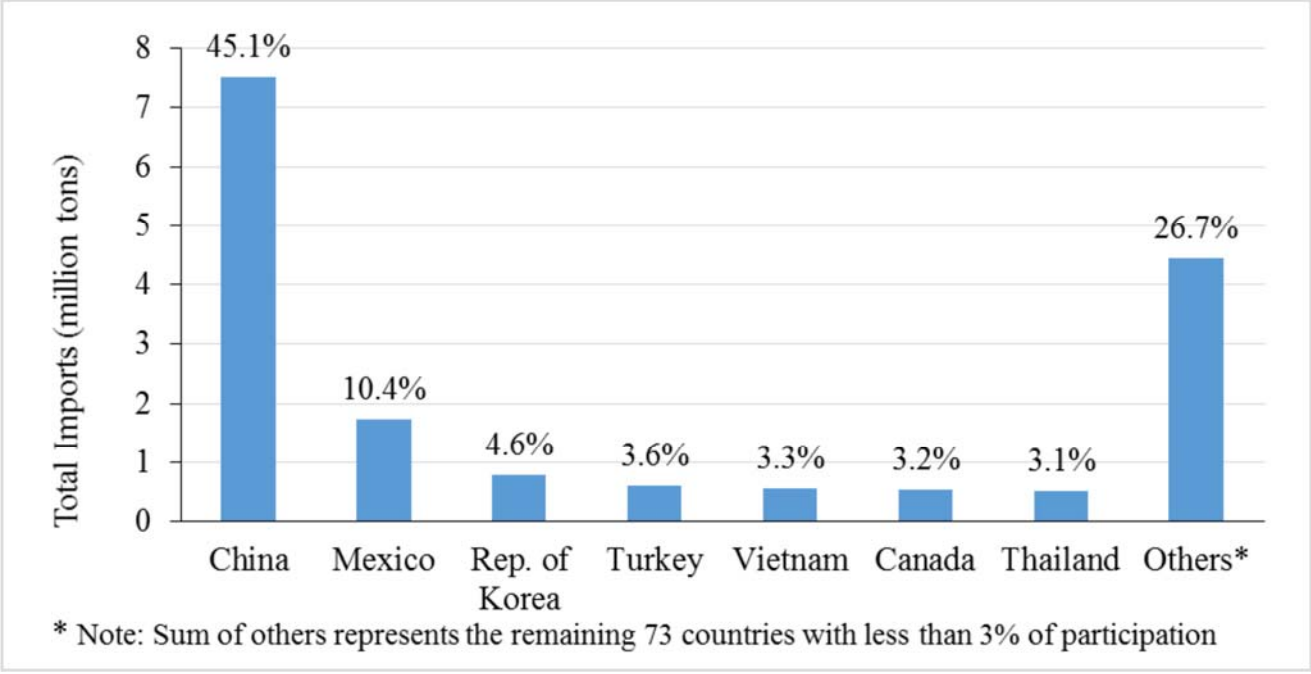
In this introduction, we have presented evidence of the importance of trade in DDGS between China and the United States. In future research, we plan to analyze the impacts of both domestic and international demand on the prices of DDGS. Our study will move beyond previous research by including the relations of not only corn and soybean meal prices but the impacts of both domestic and international demand. With the rise in the exports of DDGS as well as the high volatility in the export market, it is important to understand the implications for the U.S. cattle and ethanol industries. DDGS are an important feedstuff in livestock production. Recent reports suggest DDGS are also a vital part of ethanol plants profitability potential. Understanding the causes and correlations of fluctuations in prices of DDGS is important to both livestock and ethanol industries.

Figure 1: Total DDGS exports by country in 2015



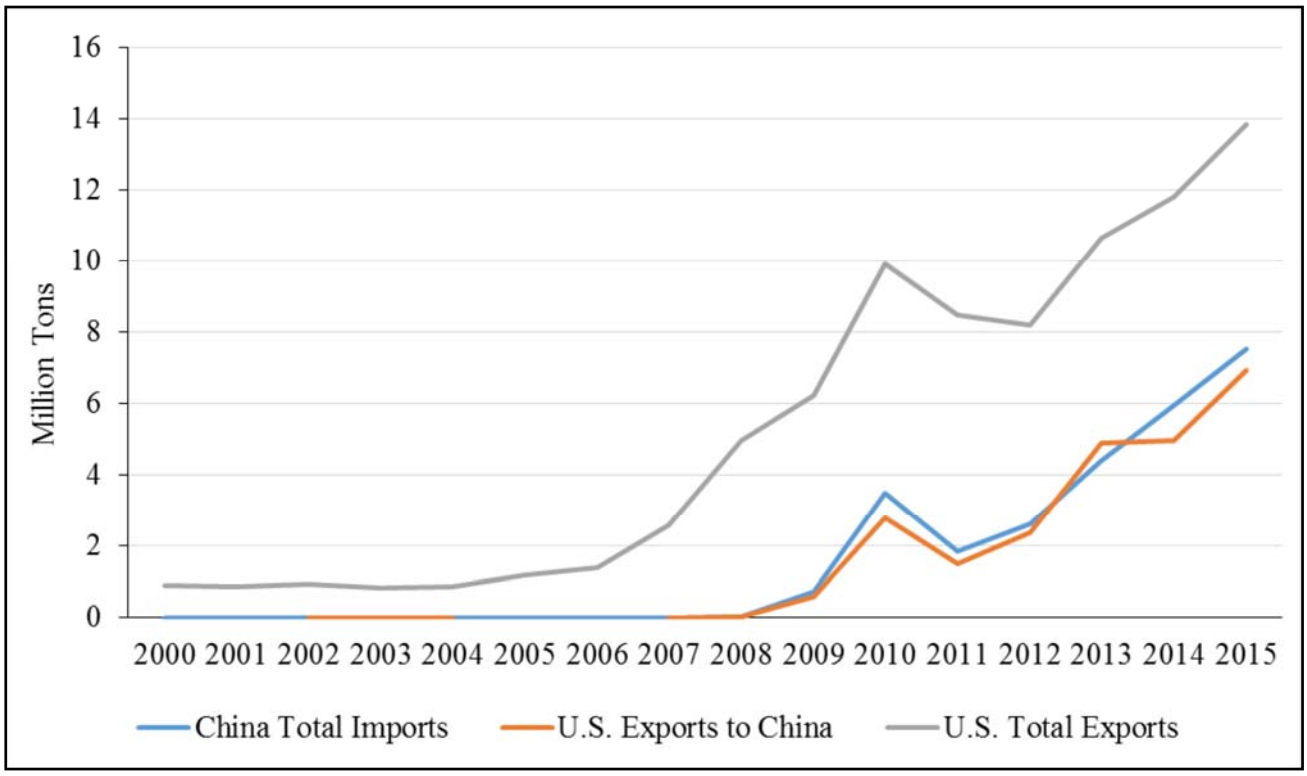
Data: UN Comtrade Database, 2016, compiled by author.

Figure 2: Total DDGS imports by country in 2015



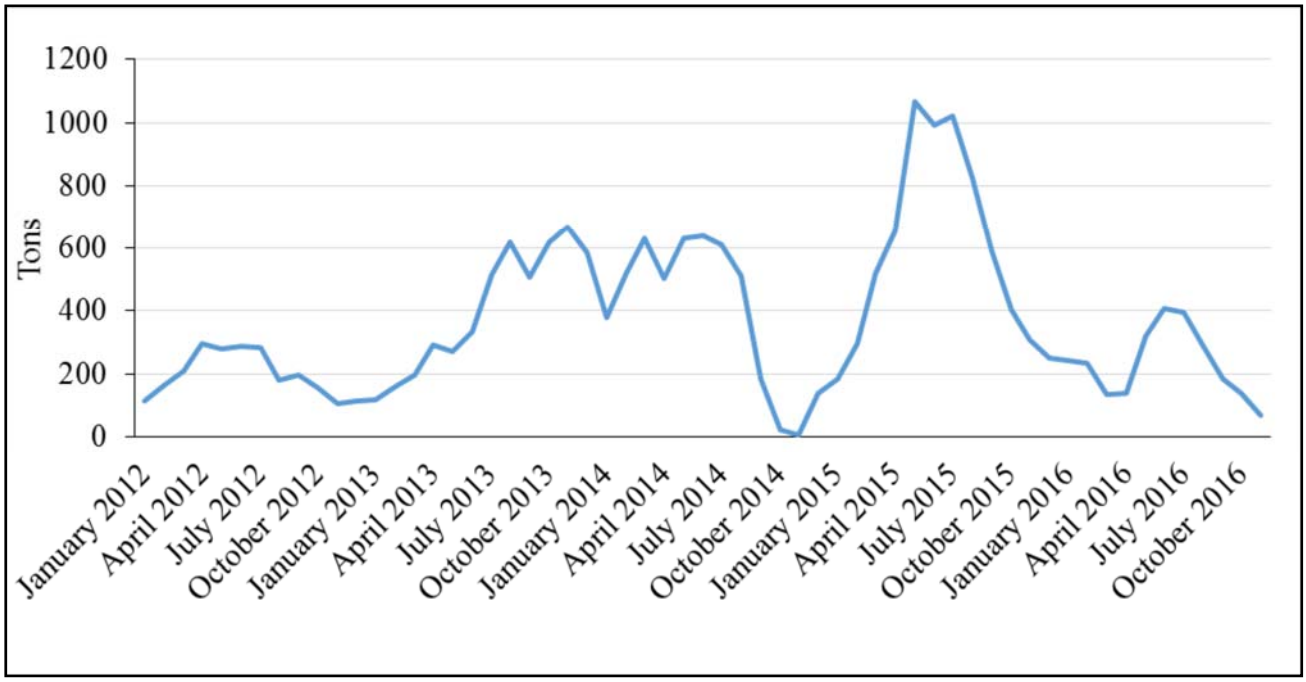
Data: UN Comtrade Database, 2016, compiled by author.

Figure 3: Trade patterns for DDGS in China and the United States by year 2000-2015



Data: UN Comtrade Database, 2016, compiled by author.

Figure 4: Monthly U.S. DDGS exports to China January 2012-November 2016



Data: US Census Database, 2016, compiled by author.

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