

## **Recent Developments in China and Its Impacts on US Agricultural Trade**

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There is never short of changes and surprises in China. The past two years have been extremely interesting for producers and policymakers watching Chinese agricultural markets. In particular, China's President Xi promised to extend all farmland contracts by another 30 years, China ended the costly \$9-\$10/bu corn support price program in 2016 and unveiled a new nationwide mandate of E10 fuel. This article introduces several key points of these policy changes, their motivations and impacts on the US agricultural trade.

### **China's New Leadership Filled with President Xi's Allies**

Unsurprisingly, China's President Xi Jinping is reelected as the General Secretary of the Central Committee of the Communist Party of China (CPC), to the 19th CPC National Congress in October 2017. Furthermore, the CPC Constitution now implicitly puts President Xi to the similar statues of Mao and Deng, which makes Xi the most powerful Chinese leader over the past four decades. The Economist recently calls him "the most powerful man in the world". Slated to be China's top leader for at least another five years, if not more, Xi represents a more prosperous and more assertive China on the global stage.

In the global arena related to agriculture, this means China likely will try to fill the void left by America to champion free trade of agricultural and food products and stronger economic ties without ideology strings. On the other hand, China is also more comfortable to counter outside pressures through tools like approvals of GMO traits, trade retaliation during trade spat, overseas investment and hostile mergers. Currently, USDA estimated that Chinese owners own over 240,000 acres of farmland in the U.S., although none in Iowa. It is well known that Chinese state-owned ChemChina is buying Swiss-owned Syngenta, one of the world's largest seed company, and that definitely won't be the last Chinese investment as China continues to grow to the world's largest economy.

### **China's Ongoing Farmland Reform and Rural Land Transfer**

China prohibits private land ownership. The current Household Responsibility System (HRS) was introduced in the early 1980s and allocates a parcel of contracted farmland to each eligible rural household on the basis of household size, which is referred to as the land contract (and use) right. Nevertheless, the allocated land is owned by village collectives represented by villager committee or township government (Hu, 1997). Farmers are free to make their own agricultural production decisions, though they are not permitted to convert the land to non-agricultural use. In the early stages of HRS, land contracts only lasted for a 1- or 2-year period, which led to significant land tenure insecurity and discouraged farmers from making land improvements (Krusekopf, 2002). Realizing this limitation, the Chinese government lengthened the land contract terms to 15 years, further extending it to 30 years in 1993 (Zhang et al., 2011).

In response to the rising need of more secure land tenure, the central government has codified a framework for the protection of land rights and development of a land rental market, including the Land Management Law (1998), the Rural Land Contracting Law (2003), and the Property Law (2007). Subsequently, the land rental market took off rapidly, with a participation rate of about 10 percent in 2001 (Deininger and Jin, 2005), and stayed around that level for almost a decade. More recently, the Chinese government has formally announced the intent to protect and split rural land rights into three parts:

ownership, contract, and use. Ensuring permanent collective land ownership, the government allows rural households to lease out the land use right while maintaining on the original land contract with the village government, which is largely to stimulate the land transfer through the rental market. In October 2017, China's President Xi announced at the CPC's 19th Party Congress that all farmland contracts will be renewed for another 30 years after its expiration.

### **The Importance of China in U.S. Ag Markets**

My colleagues Chad Hart and Lee Schulz has a nice article about this topic published in fall 2015 at CARD's Ag Policy Review and here I summarize some of the key points (Hart and Schulz 2015).

With one in every four rows of soybean grown in Iowa going to China, one can never Since 2000, China's share of our agricultural exports has increased from two percent to roughly 16 percent in 2014. The shift has been swift and powerful. China has become one of our strongest agricultural trading partners, rivalling Canada, Mexico, and Japan. The growth is even more dramatic when you consider the overall growth in agricultural trade. In 2000, the United States exported \$51 billion of agricultural products—in 2014, that value had tripled to \$150 billion.

China's prominence in US agricultural markets is also highly product-specific, with a strong concentration in oilseeds, livestock feed products, and cotton. Nearly 90 percent of US sorghum exports were shipped to China last year and utilized as livestock feed. Animal hides from our livestock sector are frequently shipped to China. For Iowa, the main trade product is soybeans. Roughly 60 percent of US soybean exports (or put another way, 25 percent of the total US soybean crop) finds its way to China. Concentrating on Iowa agricultural products, the Chinese pork market has long been a sought-after market; and while inroads have been made, the largest shares of US-China pork trade are for variety meats, and not for larger pork cuts.

### **China Ends Costly Corn Stockpiling (Support Price) Program in 2016**

This is summarized from an article at CARD's Ag Policy Review "Of maize and markets: China's new corn policy" (Wu and Zhang 2016).

To further boost rural income and ensure national food security, China started a nationwide corn stockpiling program in 2008. A key feature of this policy is that the government collects corn from farmers at minimum support prices, which are typically substantially higher than market prices. This significantly distorts the market—artificially elevated support prices have enticed farmers to grow corn and sell to the state storage facilities, while rising labor cost due to the increased rural income from this support policy have kept corn prices high (Wu and Zhang 2016). In 2011, China further unveiled a fixed and extremely costly support price policy that kept futures prices between \$9–\$10/bushel for almost five years. In early 2013, farmers in Iowa and across the Midwest braced for a difficult corn market, with prices declining from \$7/bushel in late 2012 to \$4/bushel in early 2015, and finally settling at \$3/bushel. Shielded from the world market, corn producers in China enjoyed a steady elevated corn price of almost \$10/bushel from 2011 until 2015—largely a result of China's obscure price floor corn policy.

By the end of 2015, China had stored enough corn for at least six months of domestic consumption. In contrast, the global average storage-to-consumption ratio is roughly 20 percent. The stockpiling and support price policy has a steep price tag for China—the Chinese government faces significant financial burden due to high procurement prices. USDA estimated this policy has cost China more than \$10 billion (Ballard 2016). In addition to corn degradation caused by structural deficiencies of warehouses, problems like mismanagement were commonplace; in fact, Chinese state television reported officials profited from

selling inferior grains at new grain prices, dubbing them “rats in warehouses” (Hornby 2015). Some industry analysts estimate that over 20 MMT of corn reserves are so moldy or deteriorated that they are no longer suitable for human consumption or feed use (Gale, Jewison, and Hansen 2014). Due to the huge financial and storage burden, this stockpiling program was discontinued by the Chinese government in March 2016.

The steep corn support price drove up the cost of corn domestically produced in China for feed significantly. Corn end-users in China (e.g., feed processing plants, livestock producers, bio-refineries) need to tradeoff between domestic corn and imported corn. As a result, massive amounts of corn and corn substitutes (sorghum, barley, DDGS, cassava chips, and cassava starch) were imported by China. This is also a result of the spatial mismatch in China’s corn demand and supply: the major corn production occurs in four northeastern provinces in China, while the corn demand, proxied by leading pork production regions with at least five percent of the national pork production, is mainly located in central and southern provinces in China.

To replace the state stockpiling program and support price policy, China adopted a direct payment corn subsidy policy tied to planting acres in spring 2016—a policy familiar to US farmers. China’s Ministry of Finance will allocate a 30-billion-yuan corn subsidy (\$4.51 billion) to farmers in four provinces in northeastern China, which boasts more than 60 percent of China’s corn production (Patton and Hogue 2016), in the 2016/17 crop year. The payment in each county will vary depending on the ratio of funds to area planted in corn, ranging from US \$109–\$163 per acre with an average of 150 yuan per mu (\$137 per acre) (Dim Sums 2016).

### **China’s New Nationwide E10 Ethanol Mandate**

This is summarized from a forthcoming article at CARD’s Ag Policy Review “China’s new nationwide E10 ethanol mandate and its global implications” (Li et al. 2017).

In September 2017, the Chinese government announced a new nationwide ethanol mandate (NEA 2017) that expands the mandatory use of E10 fuel (gasoline containing 10 percent ethanol) from 11 trial provinces to the entire country by 2020. This measure would require the fuel ethanol consumption in China, the largest motor vehicle market in the world, to at least quadruple within the next three years.

In 2016, China was the fourth-largest ethanol producing country/region in the world, after the United States, Brazil, and the European Union. From 2004 to 2016, the average annual production growth rate was 16.8 percent. The total effective capacity in China’s ethanol industry (including beverage and alcohol, industrial, and fuel ethanol) is about 10 million tons, with 2.6 million tons in fuel ethanol production. Corn is China’s main feedstock (called generation 1) for ethanol production, currently accounting for 64 percent of total output, with the plants mainly located in the northeastern part of China. After China halted the development of generation 1 ethanol in 2006, it shifted support to “generation 1.5” feedstock, such as cassava and sweet sorghum. Cassava refineries are located in southern China, close to domestic and foreign cassava production regions. Recently, China has been encouraging ethanol production using cellulosic feedstock (called generation 2). However, cellulosic ethanol production is not expected to reach large scale production until 2025 (NEA 2017).

Currently, China consumes 40 billion gallons of gasoline and one billion gallons of ethanol. Projections show that by 2020 gasoline consumption will reach 46 billion gallons (USDA 2017). Meeting the national E10 mandate would require an extra 3.6 billion gallons of ethanol, putting China ahead of the European Union to become the world’s third-largest ethanol consumer.

Since details of the mandate have not been disclosed, it is not yet clear how China will generate more than four-fold output growth within three years (assuming domestic production is to keep up with consumption). Currently, production capacity utilization rate is about less than 70 percent, therefore a short-term production spur can be achieved with existing facilities. Beyond that, a dramatic increase in capacity is needed. Since it takes one to two years to build a large scale generation 1 or 1.5 refinery in China, it is possible that China will be able to construct the physical facilities in time.

US corn exports to China resumed in 2017 after Syngenta's Duracade trait (used in the US against rootworms) got Chinese approval in July 2017. So it is possible that if China increases corn imports that the United States will be a dominant source.

In the past, China has imported large quantities of ethanol when domestic production has fallen short of demand. If imports surge as a result of the E10 mandate, the United States, the top ethanol exporter to China, will benefit. In fact, as this report is being prepared, it is profitable for US producers to export to China, even with the 30 percent tariff (S&P Global Platts 2017).

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