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## U.S. Exports Surge as China Supports Agricultural Prices

by **Fred Gale**



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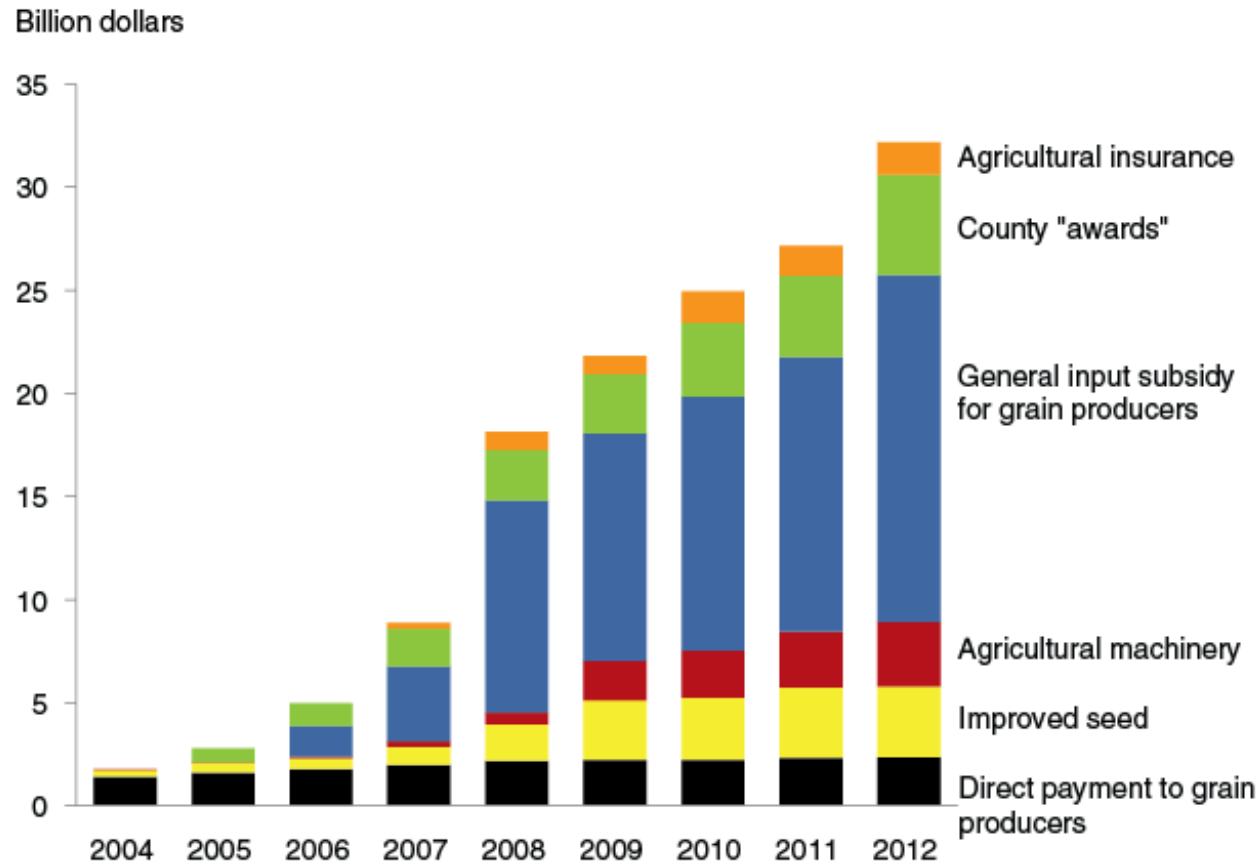
In 2004, China initiated a package of government support aimed at major grain-producing regions that featured elimination of agricultural taxes, a direct payment to grain producers, a subsidy for improved seeds, and a subsidy for machinery purchases. In subsequent years, Chinese officials added price supports for rice and wheat, financial awards to grain-producing counties, and a “general input subsidy” for grain producers. Many of these measures were also extended to oilseeds, cotton, and other crops to spread benefits more widely and address supply shortfalls in other subsectors.

In 2012, China reported spending \$75 billion on agricultural support, equal to about 11 percent of the value of its agricultural output. Much of the funding was allocated for measures that make little immediate contribution to incomes of farmers, including construction of irrigation systems, storage of commodity reserves, programs to create model farming districts, and loans for nonfarm agribusinesses. The fastest growing component of farm payments was a general input subsidy to grain producers that was tied to annual increases in fertilizer and fuel prices. In 2012, direct payments for rice and wheat producers were estimated at \$100 or more per acre in many localities.

#### Highlights:

- As Chinese officials expanded support for agriculture, they began to rely on raising price supports to maintain net returns to farmers.
- China became the largest market for U.S. agricultural exports as its rising prices eroded the relative competitiveness of Chinese commodities.
- Chinese officials have signaled intentions to keep increasing support for farmers and experiment with new policies.

## China has boosted expenditures on agricultural subsidies at a rapid pace



\*Note: Amounts converted to U.S. dollars at official exchange rates.  
Source: USDA, Economic Research Service compilation of information from China Ministry of Finance.

While payments to Chinese farmers have grown rapidly over the past decade, many observers and officials in China have noted the subsidies' small contribution to rural income and weak production incentives. The subsidies have not kept pace with rising production expenses and off-farm wages during a decade of rapid economic growth. The increases in costs have squeezed net returns to farmers, weakening incentives to produce grains and other crops. With agricultural production costs outpacing subsidy payments, Chinese officials began raising price supports to boost farm income and stimulate production. Having lowered tariffs and many other barriers to trade after joining the World Trade Organization (WTO) in 2001, China saw higher domestic prices lead to rapid growth in agricultural imports.

## Officials Rely on Raising Price Supports

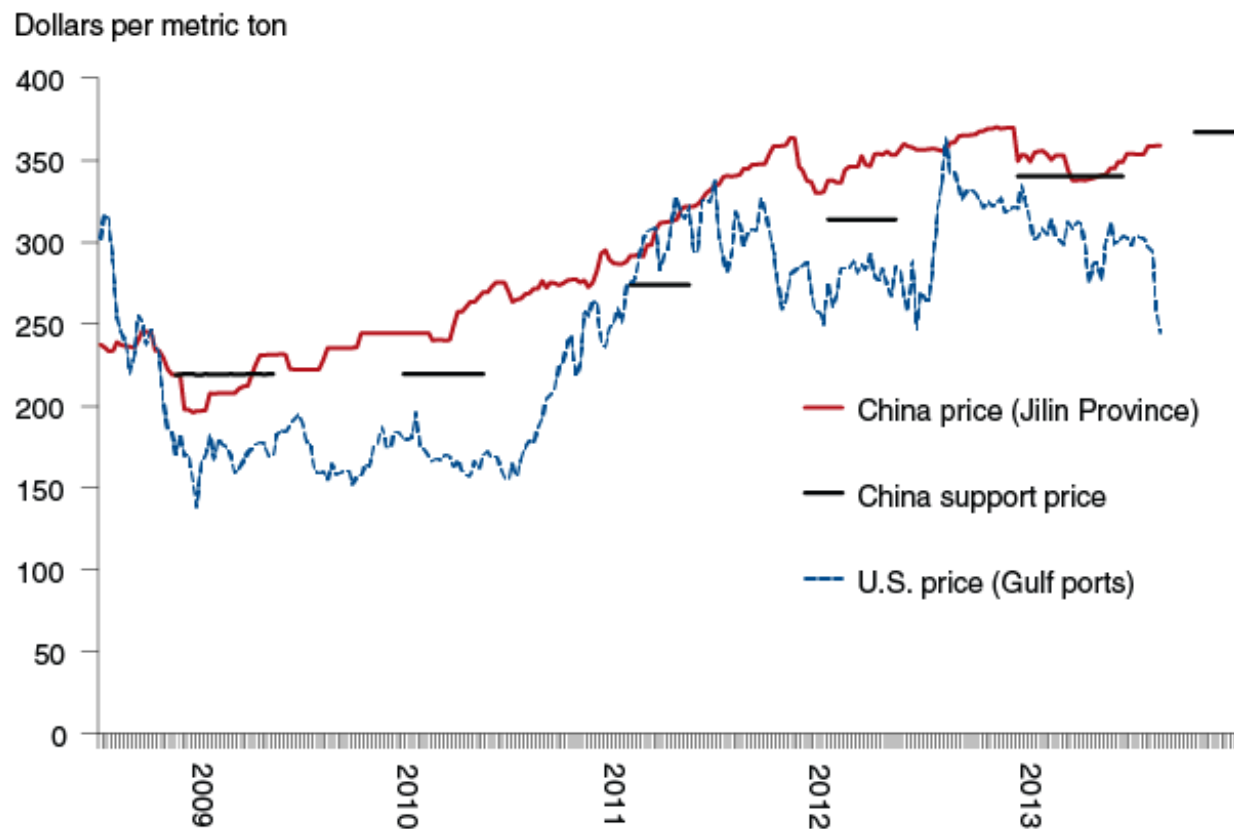
Chinese officials introduced minimum procurement prices for rice and wheat in 2004-05 to act as a floor under market prices. In 2008, officials began raising the minimum prices annually, and they also added price supports for corn, soybeans, and rapeseed. Additional price supports were introduced in 2009 (pork) and 2011 (cotton) to keep domestic prices on a steadily rising path so as to prevent further erosion of net returns to farmers.

The stated goal of the price support programs is to prevent steep declines in farm prices by purchasing commodities during periods of slack demand. Tying the floor price to increases in production costs and requiring commodities to be resold at a higher price that recovers storage costs builds in a strong tendency for prices to increase. Expectations of ever-rising prices give market participants incentives to hold commodities as long as possible, reinforcing the tendency toward rising prices. The incentive for companies to sell grain reserves is weakened, since the interest and storage costs are subsidized.

The price support programs, an appreciating Chinese currency, and domestic inflationary pressures have pushed Chinese prices above global market prices in recent years. From 2008 to 2013, Chinese support prices (in U.S. dollars) rose over 60 percent for wheat and corn, 90 percent for indica rice, and 100 percent for japonica rice. Those increases included the effects of a 20-percent appreciation of the Chinese currency against the U.S. dollar. By 2011, Chinese farm prices of most major commodities were 20-30 percent higher than prices in the United States. China began to import more agricultural commodities as its domestic prices rose higher.

China's corn market illustrates how the role of price supports varies from year to year. The price support program for corn was first introduced for the 2008/09 market year as the economies of China and many other countries were falling into recession and global commodity prices were declining sharply. That year, Chinese authorities purchased 35 million metric tons (mmt) of corn grown in northeastern provinces (more than half of production in that region and a fifth of national output). The stockpiling shielded Chinese producers from the steep decline in global corn prices in late 2008.

## China's support price for corn rose 50 percent during 2010-13



Source: USDA, Economic Research Service using data from China National Grain and Oils Information Center and U.S. Grains Council.

During the following 3 years, surging demand boosted market prices for China's corn, and authorities bought minimal volumes of corn at support prices. During 2010/11, authorities auctioned off much of the corn stockpiled during the previous year to slow rapid increases in prices. During 2012/13, Chinese authorities again intervened in the corn market by purchasing 30 mmt at support prices when the country's corn market again faced downward pressure on prices. A large portion of that year's corn harvest was downgraded due to widespread quality problems. Demand for corn was weak due to a slowing economy, a cyclical downturn in the hog sector, and an avian influenza epidemic.

### Falling Global Prices Test Price Support Program



When China joined the WTO, it agreed to lower tariffs on imported commodities. Consequently, policies that raise domestic prices above global market prices can boost imports. For example, after China announced its cotton price support in 2011, world prices fell below the price support. Since China's support price exceeded the price of imported cotton by a large margin during 2011-12, authorities stockpiled much of the domestic harvest at the support price while textile companies increased their imports of lower priced cotton.

As Chinese corn production costs continued to rise during 2013, authorities announced a 6-percent increase in the corn support price several months before that year's corn harvest to bolster net returns to Chinese farmers. However, global corn prices were declining as world supply rebounded after successive years of drought-induced tight supplies in the United States. The new Chinese floor price announced for the October 2013 corn harvest, equivalent to more than \$9 per bushel, far exceeded the U.S. futures price for December delivery of \$5 to \$6 per bushel at the time of the announcement. The prospective gap in prices was expected to give feed mills and industrial users in China strong impetus to import corn.

Chinese authorities have had difficulty supporting domestic oilseed prices because China imports large volumes of soybeans, rapeseed, and unrefined vegetable oils. China has low tariffs and no quotas on imports of oilseeds or vegetable oils, so companies purchase cheaper imports when the support price for soybeans or rapeseed exceeds the cost of imported oilseeds. Oilseed-crushing companies cannot easily pass on higher raw material costs by raising the price of final products because they also must compete with imported vegetable oils. During 2009, officials paid processors a subsidy (equal to 4 percent of the purchase price) for each ton of domestic soybeans they purchased. For several years, Chinese authorities have also given subsidies to process and store vegetable oil produced from rapeseed purchased at support prices.

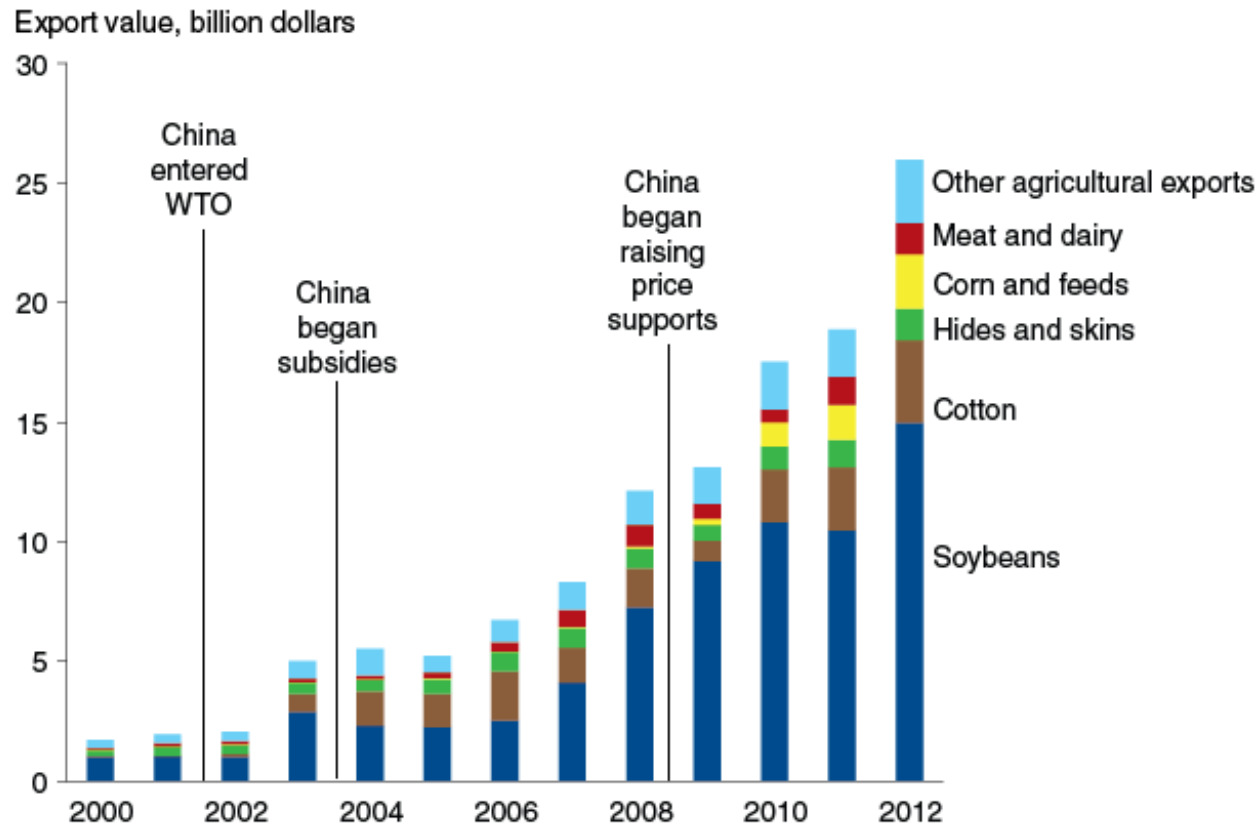
### **Surge in China's Agricultural Imports Bring Benefits to U.S.**

China's international competitiveness in agriculture eroded with the increased domestic support. Citing the surge of imports resulting from supporting domestic prices at high levels, at least one commentator in the Chinese news media referred to Chinese agricultural support programs as "subsidies for foreign farmers."

U.S. farmers have been major beneficiaries of a Chinese agricultural import boom that coincided with the growth in Chinese agricultural support. China is now the leading destination for U.S. agricultural exports (up from seventh in the early 2000s). U.S. agricultural exports to China totaled \$5 billion in 2003—the year before China began its direct subsidy payments. By 2012, U.S. sales of agricultural

commodities to China had risen more than fivefold to nearly \$26 billion per year. China now accounts for 18 percent of U.S. agricultural export sales, up from 8 to 9 percent during 2003-07.

### U.S. agricultural exports to China rose rapidly as that country boosted its price supports



WTO = World Trade Organization.

Source: USDA, Economic Research Service using data from USDA/Foreign Agriculture Service, Global Agricultural Trade System.

China's domestic support policies have contributed to U.S. export growth. For example, higher prices, subsidies, and other support induced farmers in northeastern China to plant more corn and rice. The expansion of grain output, however, came at the expense of soybeans, for which planted area declined 27 percent from 2009 to 2012. China's stagnant soybean output in a time of growing domestic demand opened the door for soaring imports. Soybeans accounted for most of the growth in China's agricultural imports from the United States during the period and hit \$15 billion during 2012.



Also in 2012, Chinese authorities raised their cotton support price—which had already exceeded the world price—even higher. The 7-percent increase in the support price for wheat that year may have induced officials to raise the cotton price to maintain parity in returns between the two crops (wheat and cotton are alternative crops in parts of eastern China). With high prices for domestic cotton, Chinese textile manufacturers sought out cheaper imported cotton while much of the domestic harvest was stockpiled by authorities. U.S. cotton exports to China reached a record \$3.4 billion in 2012. In fact, about half of U.S. cotton exports during the year went to China. With mounting stocks and domestic prices still well above global levels, Chinese authorities held the cotton price support constant in 2013. The price support program created uncertainty around the world at the prospect of Chinese authorities liquidating their cotton stockpile, an event that could affect global demand and market prices for cotton.

Increases in the price of corn—the primary ingredient in animal feed—have raised the cost of hogs and poultry production in China. The United States exported 4 mmt of corn and 2 mmt of distillers' dried grains (a byproduct of corn-based ethanol) to Chinese feed mills and livestock producers seeking lower cost feed ingredients in 2012 despite elevated U.S. prices that year. Nevertheless, the rise in feed costs also pushed livestock prices upward, leading to an increase in imports of meat. U.S. meat and dairy exports to China rose to \$1.3 billion during 2012, up from \$160 million in 2003. Meat and dairy sales likely would have been higher if not for a decade-old Chinese ban on U.S. beef, antidumping duties on U.S. poultry, and sanitary standards for pork that appear to be more strict for imports than for domestic meat.

China also increased its imports of commodities primarily supplied by other countries. Its surprise emergence as one of the world's leading rice importers was partly a result of its price support policy. Chinese rice mills and processors facing cost pressures began blending cheaper imported rice from Vietnam and Pakistan with more expensive domestic rice to maintain profit margins. In 2013, authorities raised the support price for early-season indica rice by 10 percent to encourage production, but this made imported rice even more attractive to Chinese mills. Market forecasts anticipated that China would become the largest rice importer during 2013. Chinese news media also linked a new grassland protection policy to a decline in sheep numbers and soaring mutton prices, which encouraged imports of mutton from New Zealand.

China's input subsidies may also have contributed to the rise in imports by indirectly pushing production costs upward. Many of China's subsidies are aimed at "modernizing" agriculture by inducing farmers to substitute commercial seed, manufactured feed, and petroleum-based energy for traditionally farm-supplied inputs like saved seed, animal and human labor, onfarm wastes, and byproducts. As subsidy-induced demand for modern inputs outpaces supply, input prices tend to rise at an accelerated pace. For example, as all Chinese farmers receive subsidies for buying designated varieties of improved seed, the demand for a limited supply of seed makes it

easier for suppliers to raise prices. Seed and mechanized farming services—two inputs targeted for subsidies—have been two of the fastest growing expenses for Chinese farms. Subsidies for improved animal breeds have stimulated China’s imports of breeding stock—U.S. exports of live animals totaled \$60 million during 2012. Moreover, an influx of modern livestock farms encouraged by support policies has accelerated demand for imported feeds. U.S. alfalfa exports to China exceeded \$100 million during 2012 (sales were under \$100,000 until 2006). The first major sales of U.S. sorghum to China were announced in 2013.

### Support Continues To Evolve

Chinese agricultural officials still describe the current level of agricultural support as low in comparison with that of developed countries, and they have given indications that they will continue to increase support. However, slow growth in farm productivity and increasing reliance on imported commodities has spurred authorities to explore new approaches to supporting agriculture.

In early 2013, China’s *Peoples Daily* announced that grain subsidies would no longer be “sprinkled like salt” over the rural population. Instead, payments would be coupled to area planted in grain. In 2013, the government’s announcement of the year’s expenditure on agricultural subsidies received less publicity than in previous years, and funds for direct payments to grain producers were not increased. Chinese news media included acknowledgments from several government officials that reforms in price supports and subsidy methods were being considered.

Some policies reflect ambitious goals to restructure the agricultural sector. A 2012 Ministry of Agriculture “blueprint” for modern agriculture called for creating high-standard agricultural fields, nurturing a new generation of farm operators and agricultural technicians, investing in model farming districts, and strengthening protections of agricultural resources and the environment. A number of provinces have experimented with subsidies, or “awards,” for farmers who rent adjoining plots of land to assemble a farming operation of minimum size—the threshold varies from about 5 to 15 acres in different provinces. In 2012, five provinces were selected to experiment with a new subsidy for “large” farms (the threshold varies from 50 to 165 acres) to finance investments in facilities or equipment for irrigation, onfarm grain storage, and grain-drying.

This article is drawn from...

**Growth and Evolution in China’s Agricultural Support Policies**, by Fred Gale, USDA, Economic Research Service, August 2013

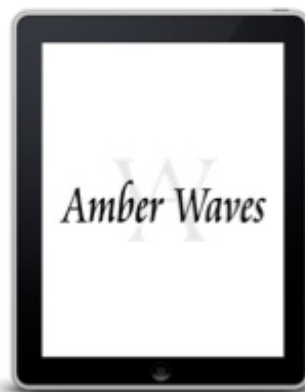
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