

## PolicyPennings by Daryll E. Ray &amp; Harwood D. Schaffer

## China imports to meet soybean needs but produces its own corn, wheat and rice

With a population of 1.3 billion and counting and a small agricultural area relative to its large population, China is repeatedly the hope for an export-led prosperity for grain and oilseed farmers in the major agricultural exporting nations. Early in the twentieth century, as the US was suffering from a long-period of low cotton prices, it was suggested that if every person in China were to lengthen the shirt they wear by just an inch, the US cotton surplus would disappear and cotton would once again be profitable. It did not happen and low prices continued to plague cotton-belt farmers.

At the end of the twentieth century as the 1995/6 Farm Bill was being debated, policy makers and farmers alike were optimistic that the high corn prices they were experiencing at the time would continue as China became a major corn importer. The expectation was that by 2002, China would be importing 500 million bushels of corn to feed its livestock. When 2002 finally arrived, China was instead in the process of exporting 600 million bushels of corn, and US farmers had just experienced four years of sub-\$2.00/bu. corn.

In 2014 China harvested 257 million acres of the eight major row-crops produced by US farmers (barley, corn, cotton, oats, soybeans, rice, grain sorghum, and wheat), 12 million more acres than was harvested in 1995. While harvested acres of the eight crops declined during the 1999 through 2003 crop marketing years, acreage of the eight crops has increased every year since 2003. Meanwhile China's production of the eight crops has increased by 37 percent since 1995.

The change in acreage has not been even across all crops. Corn has seen an increase of 35 million acres since 1995 while each of the seven remaining crops have lost acreage, with barley and oats experiencing the largest percentage loss. The data suggest that the government's emphasis has been on increasing the production of corn, wheat, rice, and cotton at the expense of the other crops.

Corn yields have increased from 78.4 bushels per acre to 92.8 bushels per acre over the same period—the 2014 US yield was 171.0 bushels per acre. The result of the increase of both acreage and yield has been the nearly doubling of corn production from 4.4 billion bushels in 1995 to 8.5 billion bushels in 2014. Clearly corn production has been the top focus of Chinese agricultural policy. Over the 2014 marketing year, China's projected domestic consumption of corn is 8.5 billion bushels with year-ending stocks of 3.1 billion bushels—36.7 percent of total use.

While the area of the wheat harvest in China declined by 11.7 million acres to 59.5 million acres,

production increased by 873 million bushels over the 1995-2014 period to 4.6 billion bushels. The increase was the result of an increase in yield from 52.7 bushels per acre to 77.7 bushels per acre—the 2014 US yield was 43.7 bushels per acre. The year-ending stock level for the 2014 marketing year is projected to be 2.3 billion bushels or 50.2 percent of use. Over the two decades, most of the variation in production compared to generally increasing consumption was covered by changes in stock levels.

Rice production increased by 11.5 percent from 4.1 billion CWT (hundredweight) in 1995 to 4.5 billion CWT in 2014. Over that period yield increased by 13 percent to 42.5 CWT per acre (the 2014 US yield was 54.4 CWT per acre) while the area harvested declined by a little more than 1 percent. Rice imports have increased over the period and account for 3 percent of total utilization. Projected year-ending stocks for rice for the 2014 crop marketing year are 1 billion CWT or 31.5 percent of total utilization.

The brightest spot for crop exporters has been soybeans where China's imports have jumped from 29 million bushels in the 1995 marketing year to an anticipated 2.7 billion bushels in the current 2014 crop marketing year. During that same period, China's soybean production has declined by 42.3 million bushels. The area devoted to soybean production has declined by 16.5 percent while the yield has increased by 9 percent to 27.0 bushels per acre compared to the US yield of 47.8 bushels per acre, accounting for the 8.5 percent decline in production. Soybean consumption in China for 2014 stands at 3.2 billion bushels a 512 percent increase over the period. Projected 2014 year-ending stocks for soybeans are 526.4 million bushels or 16.6 percent of utilization.

The other bright spot for crop exporters has been cotton, though for US producers it has been a mixed picture as exports have followed the movement of mill jobs and domestic consumption to China and other nations. China has been able to increase its production of cotton by 37 percent to 30 million bales while reducing harvested acres by 18.8 percent because of a 68.8 percent increase in yield between 1995 and 2015 to 1,324.0 pounds per acre—the US yield in 2014 was 795.0 pounds per acre. Cotton imports have increased from 2.9 million bales to 7.3 million bales over the period, though annual imports have been as high as 24.5 million bales. The projected year-ending stocks are 65 million bales or 185 percent of total utilization. With essentially two years of stocks on hand, China

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can reduce cotton imports to little or nothing if it so chooses.

As we look at the Chinese bulk agricultural commodity markets, it becomes clear that China has made the strategic decision to de-emphasize soybean production in favor of increasing the production of corn, wheat, rice, and cotton, with two of them being critical food grains. The changes in corn production matches the increase in soybean imports as China has sought to meet the increased demand for meat by producing the bulk of it domestically.

With its low dependence on imports and large domestic stocks of corn, wheat, rice, and cotton, China

has reduced its vulnerability to one-year price shocks.

As for the hope that China's large population will bring about an across-board-export-led prosperity for farmers in the US and other major exporters, we would not hold our breath. They have defied predictions for increased imports in the past.

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