

Policy Pennings by Dr. Daryll E. Ray

Since 2000, China has reduced massive rice and wheat stock levels but are now exporters of both

In this column we continue our examination of agriculture in China by looking beyond meat and corn to other grains grown in China. USDA reports that China grows barley, corn, millet, oats, rice, sorghum, and wheat.

Four of these six grains, barley, millet, oats, and sorghum together accounted for 4.6 percent of total grain production in 1990. By 2007 their share of national grain production had dwindled to 2.2%. The stocks of these grains stood at 1.39 percent of their utilization in 1990, falling to 0.29 percent in 2007.

By way of contrast, in 2007 rice accounted for 33.3 percent of China's grain production, virtually all of it used for food consumption. In that same year, wheat accounted for 27.2 percent of China's grain production, 94 percent of which was used for food consumption. Corn was responsible for the other 37.3 percent of grain production, very little of which was used for direct human consumption.

What is interesting about the grains in China is the changes that have taken place since 1990. Having looked at corn in an earlier column, here we shift our focus to the two primary food grains in China—rice and wheat.

Between 1990 and 1999, domestic food consumption of rice steadily rose from 124 million tonnes to 134 million tonnes according to USDA Production, Supply, and Distribution numbers (<http://www.fas.usda.gov/psdonline/psdQuery.aspx>). Production rose as well, showing the expected year-to-year fluctuations. At the same time, harvested area decreased from 81.7 million acres to 77.3 million acres while the yield increased by 11 percent.

During the 90s, China was a net exporter of rice in 8 of the ten years. In those same years, China's year ending stock-to-use ratio for rice fluctuated between 64 and 76 percent.

Beginning with the 2000 crop year, China's agricultural policies appear to have changed resulting in an 11.8 million acre reduction in rice harvested acres over the four year period 2000-2003. Rice production plummeted from 31.3 million tonnes to 26.5 million tonnes. Despite the decline in production, China was a net exporter of rice in 3 of the 4

years in that period, exporting 2.7 million tonnes in the 2002 crop year.

China was able to feed its population and continue to export rice by drawing on its large stocks level. During that time the year ending stocks-to-use ratio declined from 72.5 percent in 1999 to 33.2 percent in 2003.

Starting with the 2004 crop, China began to increase the harvested area for rice, adding 4.5 million acres in that year alone. In the 2004-2007 period, the stock-to-use ratio was stabilized in the 28-29 percent range as China continued to meet its domestic needs for rice with a little left over for exports.

The wheat numbers tell a similar, but in some ways, more interesting story. During the 1990s, China increased its wheat year ending stocks-to-use ratio from 48.7 percent to 90.5 percent by importing massive amounts of wheat beyond domestic demand requirements. Throughout the decade, China was a net importer of wheat, shipping in over 60 million tonnes of wheat.

At the same time that China was increasing its stockpile of wheat, domestic demand increased from 102.5 tonnes per year to 109.3 tonnes per year. Over that decade China's harvested acreage for wheat declined from 76 million acres to 71.2 million acres while the yield increased from 47.4 to 58.7 bushels per acre.

In the 2000-2004 period—one year longer than with rice—China's wheat acreage declined rapidly from 71.2 million acres to 53.4 million acres while yields stagnated in the 55 to 58 bushel per acre range before jumping to 63.6 bushels per acre in 2004. To meet domestic demand, China's year ending stocks of wheat declined from 94.1 percent to 38.1 percent.

With the 2005 crop year, China began increasing the harvested area for wheat, reaching 57 million acres in 2007. In that year the yield was 68.3 bushels per acre. In the 2005-2007 period the stock-

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China reduced grain stock levels

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to-use ratio stabilized in the mid-30s and China began exporting wheat.

In the case of both rice and wheat, it would appear that China decided to reduce its high levels of stocks by reducing acreage and drawing on stocks to meet domestic and some export demand. Once stock levels approached what look like pre-determined levels, China began to bring acreage back into production to stabilize the balance between supply and demand.

While some, including us, have noted the fact that the world demand for grains has fallen in 7 of the last 8 years, much of that shortfall appears to be the result of Chinese policies instituted to reduce their stock levels of feed and food grains.

In 1990, China had 16.5 million more acres in

grain and oilseed than was in production in 2007. Assuming that much of that acreage was kept available for agricultural use and assuming that the USDA China numbers reasonably represent the situation on the ground, it would appear that they have sufficient acreage potential so that in the immediate future they will be able to increase production to meet growth in demand for grains.

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