



TRANSFORMING CHINA

WILL A MODERNIZED CHINESE AGRICULTURE UNDERCUT U.S. CORN AND BEAN SALES?

BY EDITH MUNRO

A growing wave of soybean imports appears to make China increasingly dependent on U.S. supplies.

Last market year, one out of every four rows harvested was bound for China. In the new market year, nearly two out of every three bushels of soybeans sold by U.S. exporters has a Chinese destination.

China produced fewer than 500 million bushels (mbu) of soybeans but imported 2.1 billion bushels — a record 895 mbu of which came from the U.S. Meanwhile, U.S. corn farmers have finally begun to see long-anticipated corn sales into China. But could this change? Could current efforts to modernize its farm sector make China less import-dependent?

“China is the big ‘x-factor’ in world agricultural markets right now,” says Tom Sleight, CEO for the U.S. Grains Council. “It’s not a question of who is involved [in modernizing], but of who isn’t.”

China is attracting investments by large global organizations, says Ken Golden, director of public relations for Deere & Company. “The country is also encouraging mechanization and improved farming practices.”

Deere now has more than 5,000 employees in China, eight manufacturing facilities, a research and development center and a large supplier network providing low-, mid- and high-horsepower tractors, combines and diesel engines.

Seed companies are collaborating with the Chinese government, academia, other industries and Chinese farmers to develop better genetics. Last February, DuPont Pioneer signed a multi-year agreement with the Beijing International Flower Port to build a state-of-the-art technology hub that will develop new high-yielding corn hybrids for Chinese farmers.

China is “rapidly adopting new technologies, improved agronomic practices, and mechanization,” says William Niebur, DuPont vice president and general manager for DuPont Pioneer China.

“The Chinese policy is to be 95% self-sufficient in strategic commodities like corn and pork,” explains Sterling Liddell, vice president of food and agricultural research for Rabo Agri Finance. That policy pushes China to maximize domestic corn production rather than soybeans, while at the same time an expanding, evolving hog industry is increasing China’s soybean usage.

A decade ago, 70% of China’s hogs were raised in backyards,

Liddell says. “Now close to 70% are raised in confinement, and that means all livestock will need more corn and soybeans.”

A shift to emphasize domestic soybean production at the expense of corn acres would require a major switch in Chinese central policy, Liddell says. “In the long run, could they switch to be more oilseed-friendly? They could, but it is unlikely. They need grain just as much as they need beans.”

In the corn sector, China’s yields have been climbing steadily, from about 50 bu./acre in 1980 to 95 bu./acre by 2010-2011, and Niebur believes China’s approval of biotech-enhanced corn could shift the trend line up even faster. Achieving 95% self-sufficiency is, however, “highly dependent on population growth and overall consumption rates that are also increasing exponentially,” he says.

There are also challenges that can’t be solved with better seed or better equipment.

“Their yields are still about half of U.S. yields,” notes Chad Hart, a grain markets specialist at Iowa State University. “Their farmers have postage-stamp size farms where mechanization does not make sense. There’s still a lot of animal plowing, hand picking and air drying that pulls down productivity.”

Kevin Rempp, a Montezuma, Iowa, farmer on the Iowa corn checkoff board, saw the challenges



(Above, left to right) ♦ A Chinese farmer fills skips in a planted corn field by hand. For many, weed control is done by hand-hoeing. ♦ Grain storage in much of rural China still relies on traditional woven structures. ♦ China's population, now more than 1.3 billion people, continues to grow. Younger Chinese want better diets that include more animal protein, increasing demand for soybeans and corn. ♦ Some 70% of the 690 million pigs China produces are now raised in confinement by commercial operations like the Lizhi Agricultural Co. near Guangzhou. ♦ Harvested corn piled in a north central Chinese farming community. Large-scale flat storage, available in some areas, is government-owned. ♦ Chinese farm equipment is often scaled down to fit small operations. At harvest, corn is frequently left on the ear to dry, then shelled an ear at a time. Stalks are collected and burned as fuel for the winter.

facing China's corn sector during a crop tour in 2011.

"They might have a 100-acre field divided into 100 different plots and planted by hand," Rempp recalls. "In some areas they do have small planters, but if they see a gap, they go back and plant it by hand (see first photo). All the corn we saw was picked by hand and laid out on the street to dry. A lot of their wheat is still cut by hand."

China could improve efficiency, "but if it gets too modern, half the country would be out of a job," he says. Increasing corn acres isn't an option either unless the Chinese are prepared to reallocate land from other crops.

"China needs about 300 million acres to feed its population," notes Liddell. "Right now they are very close or just under that number, so they have a very limited supply of arable land, and there are other resource restrictions such as water.

"So they decided which crop is

most strategic to produce; corn has been the winner."

Progress to ramp up domestic corn production will be slow, Sleight says: "It takes commercial innovation more than anything else. Their issues of land ownership and control tend to slow modernization. At the same time, China's middle class, and therefore food demand, continues to grow very rapidly.

"The world needs China to expand its own production, but I believe they will continue to buy U.S. corn as prices moderate. We're in a lull at present, but China will be a ma-

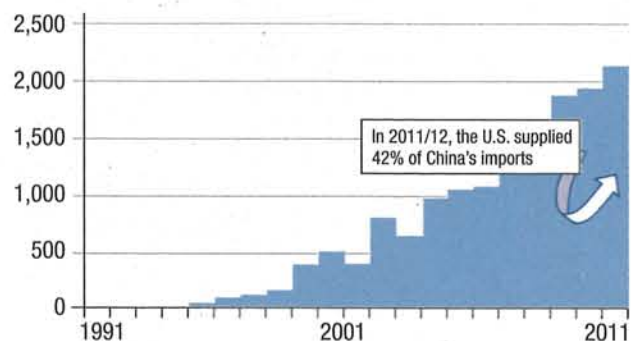
jor player in corn and soybean purchasing now and in the future."

Hart sees a similar future. "They are one of our more aggressive buyers when they see prices drop. They have been doing quite well at forward contracting. When they can catch a low point, they can move large blocks."

At DuPont Pioneer, Niebur cites trends that China will continue to increase its use of corn and soybeans in livestock feed, food and industrial applications, "which will require active and significant export and import activity in the future." **CSO**

China's wave of soybean buying

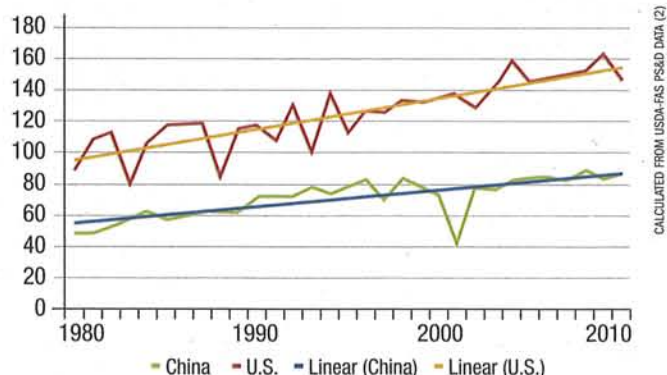
Total market year imports in millions of bushels



China's corn yield per acre is growing, but the growth trend line still lags behind U.S. yield improvements.

Corn yield increases: U.S. and China

In bu./acre



From fewer than 5 million bushels in 1991, China's total soybean imports have built to more than 2.1 billion bushels (2011). It takes one out of every four bushels the U.S. grows to supply 42% of China's purchases.