Seeing Red: How China Influences Your Grain, Livestock Prices

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A Quick Introduction: Dr. Wendong Zhang

– Grown up in a rural county in NE China
– Attended college in Shanghai and Hong Kong
– Ph.D. in Ag Econ in 2015 from Ohio State
– 2012 summer intern at USDA-ERS on farm economy and farmland values
– Research and extension interests:
  - land value/ownership [www.card.iastate.edu/farmland/]
  - agriculture and the environment
  - China Ag center [www.card.iastate.edu/china]
A corny tale

China imports a farm from Iowa

A slice of the Midwest outside Beijing

Presentations


China, U.S. reach trade agreement on beef, poultry and natural gas

China just agreed that the U.S. will be allowed to sell beef, and other major products, into China once again. This is REAL news!
6:20 AM - 12 May 2017

The agreement would also ease import restrictions on agricultural goods, China’s ban on beef imports that was imposed in 2003 after a case of mad cow disease.
The Bush and Obama administrations have sought for years to get it removed.

In exchange, the U.S. would allow the sale of cooked Chinese poultry — a product that could be done safely. "We do not intend to endanger anybody's health or safety in the U.S.,” he said.

The agreement would also streamline the evaluation of pending U.S. biotech product applications; pave the way for allowing American-owned suppliers to provide payment services to begin the licensing processes in China and facilitate the entry of Chinese banks into the U.S. banking market, among other measures.
China sets 2020 target for nationwide ethanol use to cut corn stocks
How China hopes a transplanted Iowa farm will help transform its aging ag industry (and boost Iowa trade as well)

The China-U.S. demonstration farm that recently broke ground is a prominent symbol of Xi Jinping's attempt to gently modernize rural China.

How a different Iowa visit changed China

Kenneth Quinn, Iowa View contributor

Published 4:02 p.m. CT Jan. 5, 2017 | Updated 2:04 p.m. CT Sept. 20, 2017

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Des Moines Register
China enters “New Era”

- Chinese Dream
- Belt and Road Initiative
- Xi Jinping 2030?
- COE of China
China’s Provinces

My Hometown
My hometown: Shexian, Shandong Province

Greenhouse – plastic film - Shandong Province
China’s demographics – large is beautiful

1.39 bn
Population
54% urban

453 mn
Households

415 mn
Millennials
(30% of population)

217 mn
Gen Z
(18% of population)

1005 mn
Working age population

79 mn
College graduates

1042 mn
Smartphone subscribers

US$ 606 bn
Online retail market size

Note: Millennials are those born in the 1980s & 1990s, Gen Z: Born after 2000s
Source: BBVA Research, China National Bureau of Statistics
China’s 2016 provincial GDP per capita as % of Iowa
## China vs. US

<table>
<thead>
<tr>
<th>Category</th>
<th>China</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population</td>
<td>1350.4 million</td>
<td>318.9 million</td>
</tr>
<tr>
<td>Gross agricultural production</td>
<td>555.2 billion $</td>
<td>232.4 billion $</td>
</tr>
<tr>
<td>Share of Agriculture in Total GDP</td>
<td>10.0%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Share of Agriculture in Employment</td>
<td>35.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Number of Farmers</td>
<td>241.7 million</td>
<td>3.2 million</td>
</tr>
<tr>
<td>Number of Farms</td>
<td>200.2 million</td>
<td>2.1 million</td>
</tr>
<tr>
<td>Total Farmland Area</td>
<td>406.8 million acres</td>
<td>914.5 million acres</td>
</tr>
<tr>
<td>Corn Production Area</td>
<td>89.7 million acres</td>
<td>87.4 million acres</td>
</tr>
<tr>
<td>Soybean Production Area</td>
<td>16.9 million acres</td>
<td>76.3 million acres</td>
</tr>
<tr>
<td>Wheat Production Area</td>
<td>59.6 million acres</td>
<td>45.3 million acres</td>
</tr>
<tr>
<td>Total Size of Vegetable/Herb Greenhouses</td>
<td>83.6 million sq.ft.</td>
<td>61.8 million sq.ft.</td>
</tr>
<tr>
<td>Average Farm Size</td>
<td>2.0 acres</td>
<td>433.6 acres</td>
</tr>
</tbody>
</table>
China loosens land transfer rules to spur larger, more efficient farms

Farmland in China is collectively owned and farmers only have the right to contract and use the land. Many rural migrant workers have leased out their land to those who stay in the countryside or commercial entities.

Over 30 percent of rural land has already been leased to others to operate, said Han.

Chinese farmers still cannot sell their land rights freely and the lack of clear rights makes many farmers vulnerable to land grabs by local administrations for development. A program to issue certificates confirming rights to land has covered 60 percent of farmland.

China’s leaders aim for 60 percent of the population of almost 1.4 billion to be living in cities by 2020, get 100 million migrants to settle in cities by 2020. It could be a driving force for the world’s second-largest economy.

Goal:

2016: 77 million acres (35% of cropland) transferred; 2007: 5%

Among them: 30% to co-ops or corps; 80% non-grain production

China Embraces Corporate Farming

firm, China Policy, told VOA. “New opportunities are opening up because Chinese authorities are seeking partnerships with foreign companies in the field of agriculture technology.”

“This is surely the beginning of the end of “collective farming” as a very labor intensive sector,” Kirkegaard said.

Cai Jiming, a professor of economics at Tsinghua University in Beijing said while the policy will allow private and foreign companies to rent or lease the land, they will not have ownership rights, which could discourage investments.
Chinese land is owned by collectives

(Contract Right Certificate)

- Total land size
- Number of parcels

Family Rep.

30-year term

With at least one 30-year renewal

All family members
China

$21.4 billion  U.S. Agricultural Exports, 2016

Top 5 U.S. Exports
1. Soybeans ($14.2 billion)
2. Course Grains* ($1.0 billion)
3. Hides & Skins ($949 million)
4. Pork ($578 million)
5. Cotton ($550 million)

*Excluding Corn

Export Growth
2006-2016

$6.7 billion

219% Increase

$21.4 billion

#1

Among U.S. Agricultural Export Markets, 2016

Source: FAS Global Agricultural Trade System (GATS) BICO HS-6
Share of U.S. Agriculture Exported in 2016

More than 20% of total U.S. agricultural production is exported annually.

Share of China in US Ag Exports

- >70% Cotton: 75%
- >70% Tree Nuts: 16%
- >20% Cherries: 5%
- >30% Grapes: 0%
- >50% Rice: 75%
- >50% Sorghum: 15-18%
- 50% Wheat: 5%
- 15% Corn: 2%
- 20% Pork: 1%
- 15% Dairy: 1%
- 15% Poultry: 1%
- 10% Beef: 0%
- 50% Soybeans: 62%

Twitter: @USDAForeignAg  Website: www.fas.usda.gov
Source: USDA-FAS Global Agricultural Trade System (GATS)
China’s still self-sufficient in many Ag commodities, despite growing role of exports

Export as Share of Consumption for Ag. Products in China (2013 – 2017 Average)

<table>
<thead>
<tr>
<th>Product</th>
<th>Domestic Production</th>
<th>Net Import</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>222 mil. Mt</td>
<td></td>
</tr>
<tr>
<td>Ethanol</td>
<td>2.7 mil. Mt</td>
<td></td>
</tr>
<tr>
<td>Soybean</td>
<td>96 mil. Mt</td>
<td></td>
</tr>
<tr>
<td>Fluid Milk</td>
<td>38 mil. Mt</td>
<td></td>
</tr>
<tr>
<td>Milk Powder</td>
<td>2.2 mil. Mt</td>
<td></td>
</tr>
<tr>
<td>Pork</td>
<td>7.5 mil. Mt</td>
<td></td>
</tr>
<tr>
<td>Beef</td>
<td>56 mil. Mt</td>
<td></td>
</tr>
<tr>
<td>Poultry</td>
<td>13 mil. Mt</td>
<td></td>
</tr>
</tbody>
</table>
US Ag Exports by Destination Country 2001-2016 ($ Billion)

Source: Choices
2017 Q2 Issue
US Ag Exports to China Increased Significantly since China joined WTO in 2001 ($ Billion)

Source: Choices 2017 Q2 Issue
China’s Ag Imports by Source Country 2001-2015 ($ Billion)

Source: Choices 2017 Q2 Issue

- United States
- Brazil
- Australia
- Canada
- New Zealand
- Argentina
US Loses Market Share as China Increases Meat Imports from the World

Source: Choices
2017 Q2 Issue
Richer households demand more meat and convenience foods

Source: Choices
2017 Q2 Issue
A steadily increasing disposable income, albeit at a moderating but robust pace, with wide urban-rural gap.
Most Chinese people are still much poorer than the average American. China’s GDP will overtake the U.S. level in 2028 at these projected average growth rates:

- **1992**
  - **GDP per capita (PPP)**
    - **United States**: $37,283
    - **China**: $1,846
  - U.S. GDP per capita was 20.2 times that of China

- **2004**
  - **Urbanized population**
    - **United States**: 79.8%
    - **China**: 41.1%
  - Urbanization in China was lower than that of the U.S. in 1910

- **2016**
  - **GDP per capita (PPP)**
    - **United States**: $53,417
    - **China**: $14,275
  - U.S. GDP per capita was 3.7 times that of China
  - **Urbanized population**
    - **United States**: 81.8%
    - **China**: 56.8%
  - Urbanization in China was lower than that of the U.S. in 1950
Share of food in rural China’s per capita consumption basket is declining, offset by higher value purchases.
Ibs per capita Meat Consumption by Country 2016

Source: OECD
“When the Chinese people taste our high-quality U.S. beef, there’s no doubt in my mind that they’ll want more of it” – Sonny Purdue
Urban Chinese prefer to travel, stay connected, buy protein rich food, durable goods & recreation

Urban annual per capita consumption expenditure

CHINA CONSUMPTION TRENDS | 2017

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Center for Agricultural and Rural Development
Of Maize and Markets: China’s New Corn Policy

Wu and Zhang 2016
Ag Policy Review

Dollars per bushels

Source: http://www.quandl.com/
Of Maize and Markets: China’s New Corn Policy

Wu and Zhang 2016
Ag Policy Review

Source: USDA FAS Grain: world markets and trade
Of Maize and Markets: China’s New Corn Policy

Wu and Zhang 2016
Ag Policy Review
China's Ethanol Industry in 2016

4th largest producer – 1 Bil gal.
- After US, Brazil and EU
- Corn ethanol 64%
- Also uses cassava, sorghum, corn stover
- Imported 225 mil. gal, mainly from U.S.
- Tariff rose from 5% to 30%

China consumes 40 bil. gal gasoline; 1 bil. gal ethanol in 2016
China’s projected corn import potential and the role of ethanol

Li Hayes Zhang 2017
Ag Policy Review
The Chinese have long been wary of genetically modified organisms. The country allows imports of genetically modified corn and soybeans for animal feed. But it’s held off on domestic commercialization of those crops.

Over the past year, China has signaled it would relax that stance. This week it released its latest five-year plan for science and technology, saying it would push for the commercialization of biotech corn and soybeans in the next few years.
GMO in China: Controversy/Divide

Yongyuan Cui

Larry King in China; Key opponent voice of GMO

GMO corn illegal
China OKs two GMO products for import

07/17/17 2:45 PM   By Steve Davies

WASHINGTON, July 17, 2017 - China has approved two more genetically modified products for import, which should leave four products awaiting decisions from the Chinese Ministry of Agriculture (MOA). But Dow AgroSciences said today that the ministry is “now indicating that Enlist soybeans is not covered” by a 100-day economic action plan initiated by the U.S. and Chinese governments in April.

The ministry has approved Syngenta’s Agrisure Duracade corn, engineered to be resistant to corn rootworm, and Monsanto’s Roundup Ready corn. Dow received import approval last month for Enlist corn, which China approved along with a Monsanto soybean variety, Vistive Gold. At the time, Dow said it had received inquiries from China’s National Biosafety Committee about Enlist soybeans and planned to address those questions quickly.

Today, Dow AgroSciences said it “understands Enlist soybeans was considered one of ‘the eight pending biotechnology traits’ by the U.S. Department of Commerce for the 100-day initiative referenced in the (U.S.-China) joint release on May 10,” which provided a progress report on the 100-day plan.
China aims to build a global infrastructure network
“Belt and Road” infrastructure projects, planned and completed (March 2017)

Belt and Road Initiative
Future of High-Speed Rail in China
A corny tale

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A slice of the Midwest outside Beijing

**Presentations**


Iowa Farmland Value Portal

#ISUIlandvalue

2% increase since Nov 2016

http://bit.ly/LandResults2017
Thank You!

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