

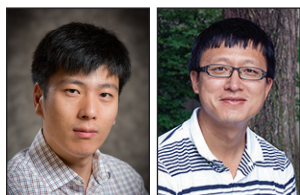
Ag Decision Maker

A Business Newsletter for Agriculture

Vol. 22, No. 4

www.extension.iastate.edu/agdm

February 2018



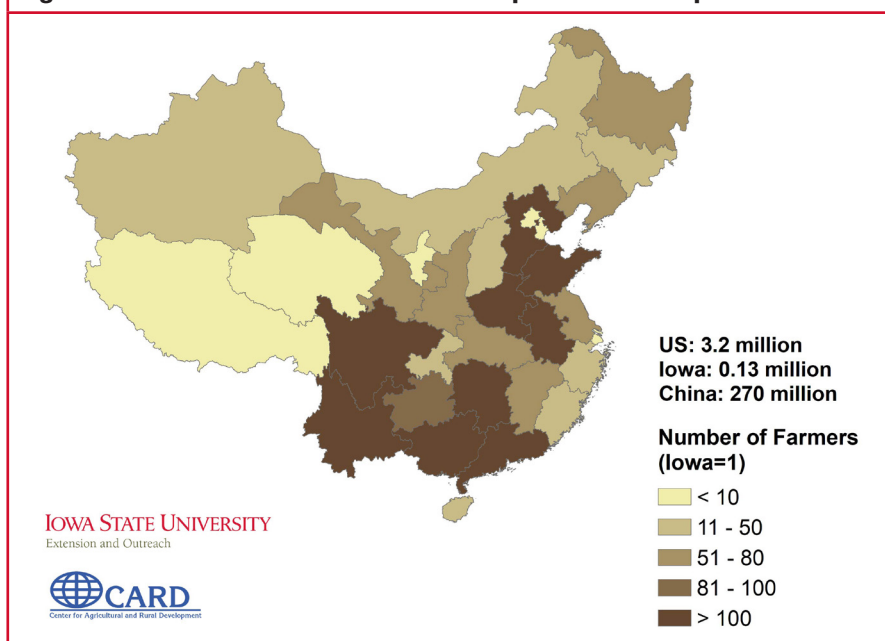
Navigating the Chinese agricultural economy through the lens of Iowa

By Wendong Zhang, extension economist, 515-294-2536, wdzhang@iastate.edu; Minghao Li, postdoctoral researcher, Center for Agricultural and Rural Development, Iowa State University

With one in every four rows of U.S. soybeans exported to China, the significance of China on the U.S. agricultural trade and economy can't be overestimated. This relationship is particularly unique to Iowans with Iowa's long-time former Governor Terry Branstad now serving as the U.S.

ambassador to China. A key reason for his appointment is his 30-year personal relationship with China's President Xi Jinping, dating back to Xi's trip to Muscatine, Iowa in 1985 when he was only a county leader. In this article, we showcase key aspects of China's agricultural economy using Iowa as the measuring stick.
continued on page 2

Figure 1. Number of farmers in Chinese provinces compared to Iowa



Handbook updates

For those of you subscribing to the handbook, the following updates are included.

Livestock Enterprise Budgets for Iowa - 2018 – B1-21 (22 pages)

Monthly Swine Feeding Returns – B1-31 (5 pages)

Monthly Cattle Feeding Returns – B1-36 (2 pages)

Lean Hog Basis – B2-41 (1 page)

Live Cattle Basis – B2-42 (1 page)

Feeder Cattle Basis – B2-43 (1 page)

Please add these files to your handbook and remove the out-of-date material.

continued on page 6

Inside . . .

Expect lower premiums for 2018 crop insurance Page 5

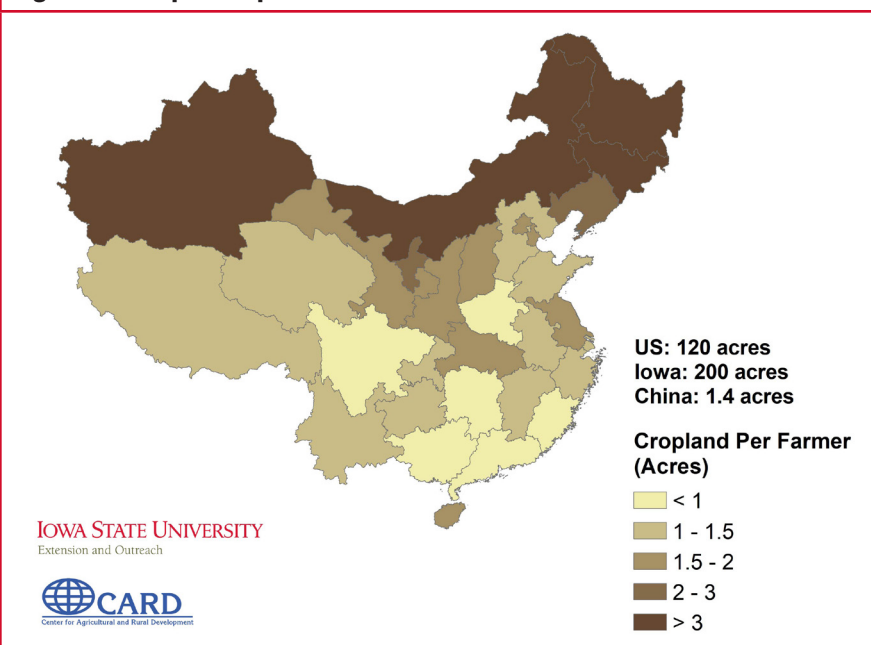
Navigating the Chinese agricultural economy through the lens of Iowa, continued from page 1

With trade valued at \$21.4 billion in 2016, China is the second-largest agricultural trading partner with the United States, after Canada. Unlike many other sectors, the United States' agricultural sector has a \$17.1 billion dollar trade surplus with China. Since China joined the WTO in 2001, its demand for U.S. agricultural products has grown more than five-fold. Moreover, \$14 billion of U.S. – China ag trade is about a key commodity Iowa specializes in - soybeans. While the bulk of China's demand is for soybeans and pork, China's appetite for U.S. beef, corn, and ethanol have all grown as well, due to a reversal of the 2003 ban on U.S. beef due to mad cow disease (USDA, 2016), the termination of China's \$9/bushel corn support price program (Wu and Zhang, 2016), and a nationwide E10 ethanol mandate for all gasoline by 2020 (Li et al., 2017).

China's 1.39 billion population is more than four times larger than that of the United States. More strikingly, 20 percent (National Bureau of Statistics of China, accessed 2018) of Chinese people are engaged in agricultural production, compared to less than 2 percent in the United States. Most provinces in China, especially in southern China, have 10 times or more farmers than Iowa (Figure 1).

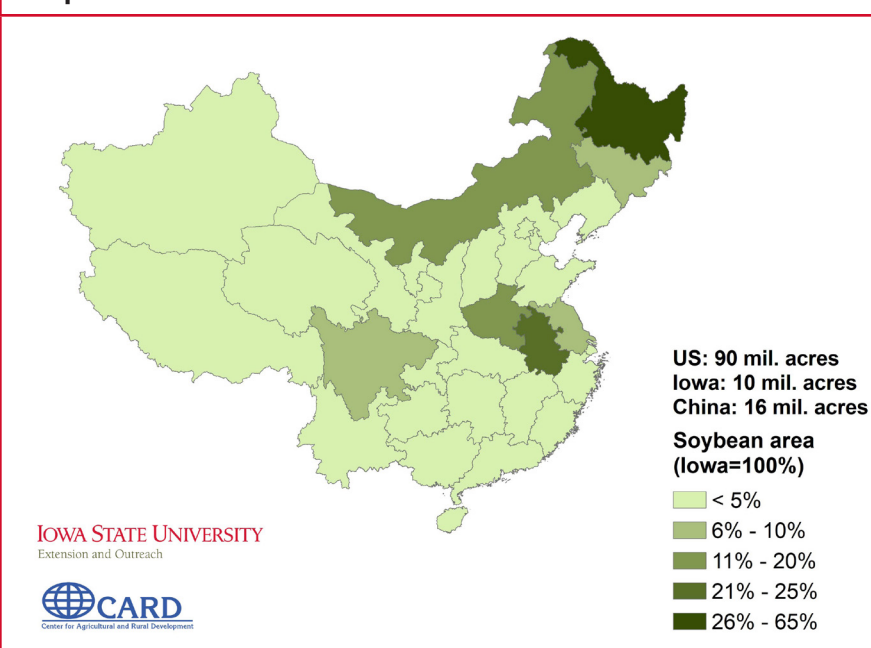
While China's total land area exceeds that of the U.S., the 270 million farmers in China have less arable land compared to the U.S. One common saying is that with only seven percent of total arable land in the world, China needs to feed 20 percent of the world's population. Figure 2 shows that an average Chinese farmer only has 1.4 U.S. acres of cropland to operate, which is a fraction of the 200

Figure 2. Crop land per farmer in China in acres



Because crop land per farmer is so small in China, using Iowa as the unit here would create too many decimal points. We use acres instead.

Figure 3. Area planted for soybeans in Chinese provinces as compared to Iowa



acres per farmer in Iowa (Ag Census 2012). In recent years, China started to experiment with a nationwide rural land transfer program that allows leasing of "operational rights" to another farmer in order to increase farm sizes. In 2015, about 33 percent of arable land was leased out to individual

continued on page 3

Navigating the Chinese agricultural economy through the lens of Iowa, continued from page 2

farmers (58 percent of leased land), cooperative and commercial farms (31 percent), and other entities (11 percent) (China Agricultural Development Report 2016).

Crop and livestock comparisons

China is the dominant soybean importer in the global market, and 87 percent of the Chinese soybean consumption is fed via export markets like Brazil and the U.S. Only four provinces in China, mostly in northeast China, with similar soil to that found in the Des Moines lobe, plant more than 10 percent of the area planted for soybeans in Iowa (Figure 3). Production totals at the national level are one-fifth the U.S. level in terms of soybean planted acres. Furthermore, the soybean yield is relatively low in China, with only 46 percent of the average yield achieved in Iowa.

Until very recently, China strived to be self-sufficient in corn production, and thus they have about the same acres of corn as the United States. While there is no single Chinese province that exceeds Iowa's corn acres, there are still five provinces in Northern China with more than 50 percent of planted area in Iowa. In particular, Heilongjiang plants the most corn in China, with 93 percent of Iowa's corn acres (Figure 4). However, the corn yield is also relatively low in China, with the highest yield (Jilin province) close to 60 percent of the Iowa average yield. So far, China has not imported much corn, less than two percent of its total domestic supply. However, the recent corn subsidy reform and E10 mandate led observers to suspect that China will start to import corn in large quantities in the near future (Li et al., 2017).

Figure 4. Area planted for corn in Chinese provinces as compared to Iowa

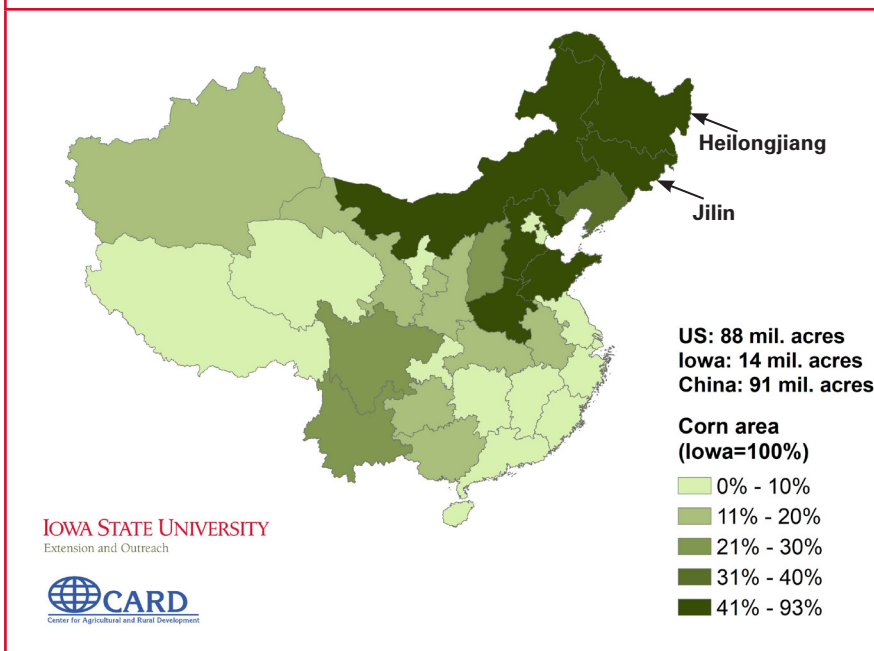
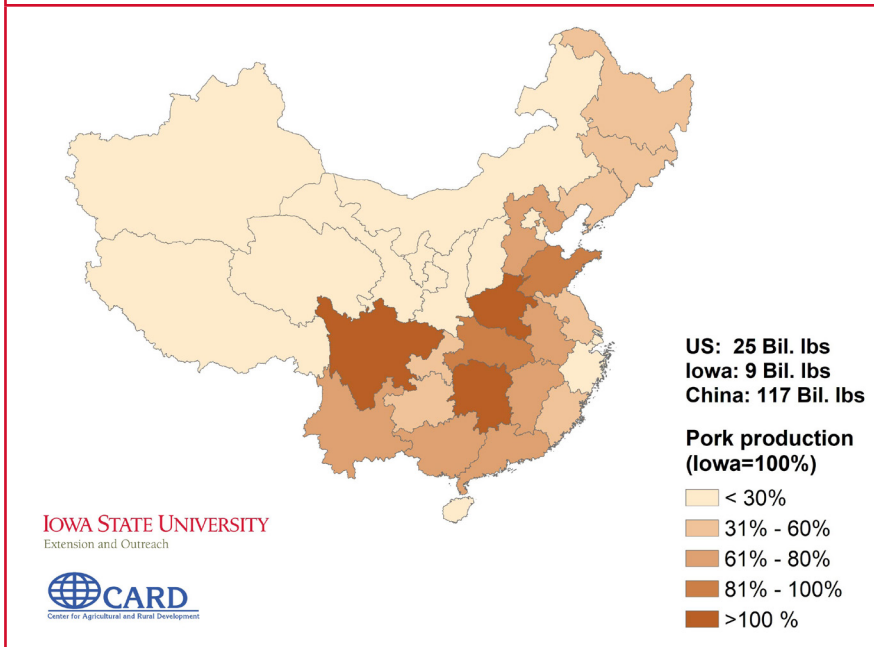


Figure 5. Pork produced in Chinese provinces as compared to Iowa



Pork is arguably the most important meat for the Chinese diet, and China is the dominant player in the global pork market. In fact, China produces 4.7 times the amount of the pork produced by the United States. Three provinces in China produce more pork than Iowa, the largest pork-producing state in the United States (Figure 5). Compared to the United States, pork production in China is much

Navigating the Chinese agricultural economy through the lens of Iowa, continued from page 3

more dispersed and closer to urban centers, with many smaller-scale, backyard pig farms. Currently, China is driving small-scale pork production further away from population centers and closer to feed-producing areas. The long-term effects of this policy on the Chinese pork industry remains to be seen.

Beef is less popular in China, and Chinese people in general prefer beef stew over a steak. Even though the per-capita beef consumption is low, China is the 4th largest beef producing country with 58 percent of U.S. production level. However, as income grows, beef consumption in China is quickly catching up. Domestic beef production mostly concentrates in northern provinces, including Xinjiang province (at the northwest corner) (Figure 6). In 2017, China's decision to re-open the market to U.S. beef, which was closed in 2003 due to mad cow disease, is widely expected to boost the U.S. beef exports.

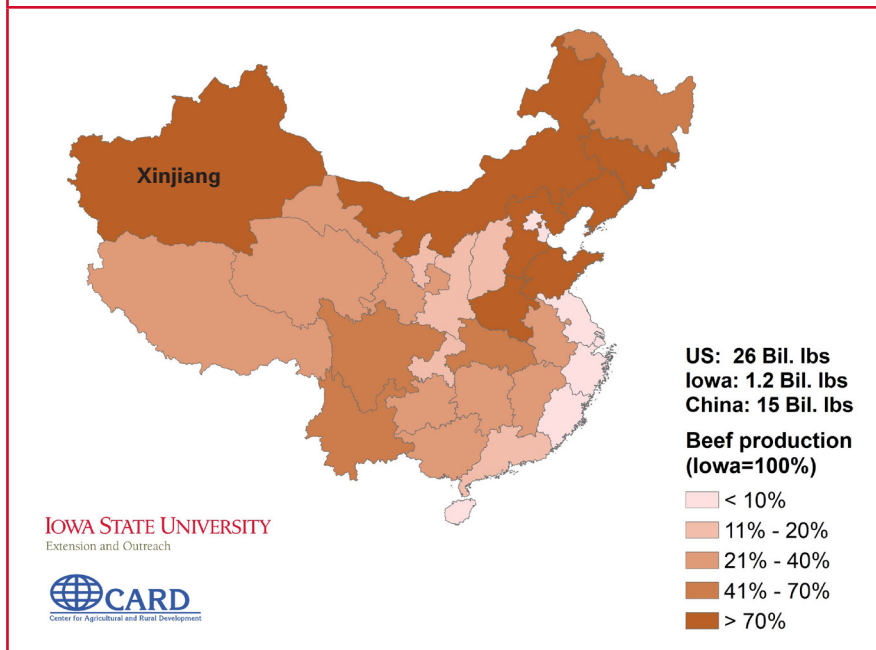
To Iowa and U.S. agricultural producers, China is and will continue to be one of the major customers for our products. The abundant land, adequate precipitation, and advanced technology we enjoy here means that U.S. agriculture will continue to have bumper production and need critical export markets like China. In addition, China's agricultural policies, including crop insurance and subsidies, are now increasingly similar to that in U.S. and Europe. In today's globalized agricultural supply chains, one could not afford to and should not ignore China and its key developments in its agriculture and economy. We hope the newly founded ISU China Ag Center (www.card.iastate.edu/china) and articles like this help you make informed decisions.

Data sources

National Bureau of Statistics of China - <http://data.stats.gov.cn/easyquery.htm?cn=C01>

China Agricultural Development Report 2016 (in Chinese, available upon request)

Figure 6. Beef produced in Chinese provinces as compared to Iowa



USDA FAS Production, Supply, and Distribution Data - <https://apps.fas.usda.gov/psdonline/app/index.html#/app/advQuery>

USDA FAS Global Agricultural Trade System Online - <https://apps.fas.usda.gov/gats/default.aspx>

USDA NASS Quick Stats - <https://quickstats.nass.usda.gov/>

References

Li, M., D. Hayes, W. Zhang, Y. Yang, X. Wang, R. Arthur (2017) "China's new nationwide E10 ethanol mandate and its global implications" Agricultural Policy Review, Iowa State University. https://www.card.iastate.edu/ag_policy_review/display.aspx?id=71

Wu, Q. and W. Zhang (2017). "Of Maize and Markets: China's New Corn Policy." Agricultural Policy Review, Iowa State University. http://www.card.iastate.edu/ag_policy_review/display.aspx?id=59

USDA Foreign Agricultural Service (2016). "China Livestock and Products Annual 2016." GAIN report number: CH 16043. [https://gain.fas.usda.gov/Recent GAIN Publications/Livestock and Products Annual Beijing China - Peoples Republic of 10-14-2016.pdf](https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Livestock%20and%20Products%20Annual%20Beijing%20China%20-%20Peoples%20Republic%20of%2010-14-2016.pdf)



Expect lower premiums for 2018 crop insurance

By Steve Johnson, extension farm management specialist, 515-957-5790,
sdjohns@iastate.edu

Most Iowa farmers will benefit from lower 2018 crop insurance premiums. The USDA Risk Management Agency (RMA) has started posting December '18 corn and November '18 soybean futures price averages used to calculate the projected prices for crop insurance. So far, these 2018 averages appear to be slightly lower than the 2017 projected prices of \$3.96 per bushel for corn and \$10.19 per bushel for soybeans, respectively.

However, another factor used to determine final premiums are price volatility for December corn and November soybean futures options. However, it's this volatility factor the last five trading days of February that is used to determine final premiums. In early February, volatility for corn was four points lower as compared to 2017 and three points lower for soybeans. Currently, these volatility factors for corn and soybeans are at some of the lowest levels in the past 20 years.

According to projections compiled by Dr. Art Barnaby, Kansas State University extension ag economist, these lower volatility factors will impact final 2018 premiums. Barnaby anticipates the corn rates will be discounted by three percent in high-risk counties in the Corn Belt and over 20 percent in low-risk counties. (www.agmanager.info/crop-insurance/risk-management-strategies/low-volatility-means-lower-crop-insurance-premiums)

Since it's the last five trading days of February that determine these volatility levels, rates and thus final premiums will not be known until the first couple days of March. Farmers should communicate with their crop insurance agent prior to the March 15 final sales closing date for spring crops. Some may consider buying crop insurance at high levels in 2018 since premiums will reflect these lower volatility factors.

Other crop insurance changes

Some additional 2018 changes in crop insurance coverage include:

If you are adding ground in a new county, you must notify your crop insurance agent prior to the March 15 deadline.

The period deemed "practical to replant" was shortened from 25 to 10 days after the final planting dates. In Iowa, the new late planting periods will run from May 31 thru June 10 for corn and June 15 thru June 25 for soybeans.

Damage to crop from actions caused by a third party. The insured can protect their Actual Production History (APH) for the affected farm. Insureds will still need to provide timely Notice of Loss (NOL) and this will only affect production and acres damaged.

Example: A neighbor negligently applies chemical and the resulting spray drift damages the insured's crop. While the loss is not covered by crop insurance, the insured can still benefit by eliminating the production and acres impacted from the loss and used to determine their APH database.

Use of Revenue Protection

Iowa farmers annually select Revenue Protection Crop Insurance on over 95 percent of all insured row crop acres in Iowa. Insureds are guaranteed revenue per acre using their APH yields times a price guarantee. This price guarantee is determined annually as the higher of the projected price (February simple average) or harvest price (October simple average) for December corn futures and November futures prices. Insureds then choose annually a coverage level by crop and county between 50 percent and 85 percent of that revenue guarantee.

Farmers may want to review with their crop insurance agent existing unit structure, level of coverage and related crop insurance changes well in advance of the March 15 deadline. Consider making an appointment with your crop insurance agent for the week of March 5 when final crop insurance premiums will also be known.

Updates, continued from page 1

Internet Updates

The following Information Files and Decision Tools have been updated on www.extension.iastate.edu/agdm.

Historic Hog and Lamb Prices – B2-10 (5 pages)

Historic Cattle Prices – B2-12 (6 pages)

Feeder Steer-Heifer Price Spread – B2-45 (1 page)

Livestock Enterprise Budgets for Iowa - 2018 – B1-21 (12 Decision Tools)

Current Profitability

The following tools have been updated on www.extension.iastate.edu/agdm/info/outlook.html.

Corn Profitability – A1-85

Soybean Profitability – A1-86

Iowa Cash Corn and Soybean Prices – A2-11

Season Average Price Calculator – A2-15

Ethanol Profitability – D1-10

Biodiesel Profitability – D1-15

Permission to copy

Permission is given to reprint ISU Extension and Outreach materials contained in this publication via copy machine or other copy technology, so long as the source (Ag Decision Maker Iowa State University Extension and Outreach) is clearly identifiable and the appropriate author is properly credited.