

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](http://www.card.iastate.edu/farmland/agriculture_and_the_environment)

China Ag center www.card.iastate.edu/china

Key Messages (on Ag Decision Maker): Understand Contemporary China!

- 1. Ag is not China's comparative advantage**
- 2. China suffers more economically, but retaliate on ag states like Iowa**
- 3. Trade war makes China further diversify away from US**
4. Trade war exposes early strategic misjudgments and growing mistrust
- 5. China is a country of rapid change**
6. Chinese economy and relations with US at inflection points
7. Chinese producers and consumers increasingly think and act like Americans

#1: Ag is comparative advantage for US, not for China

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

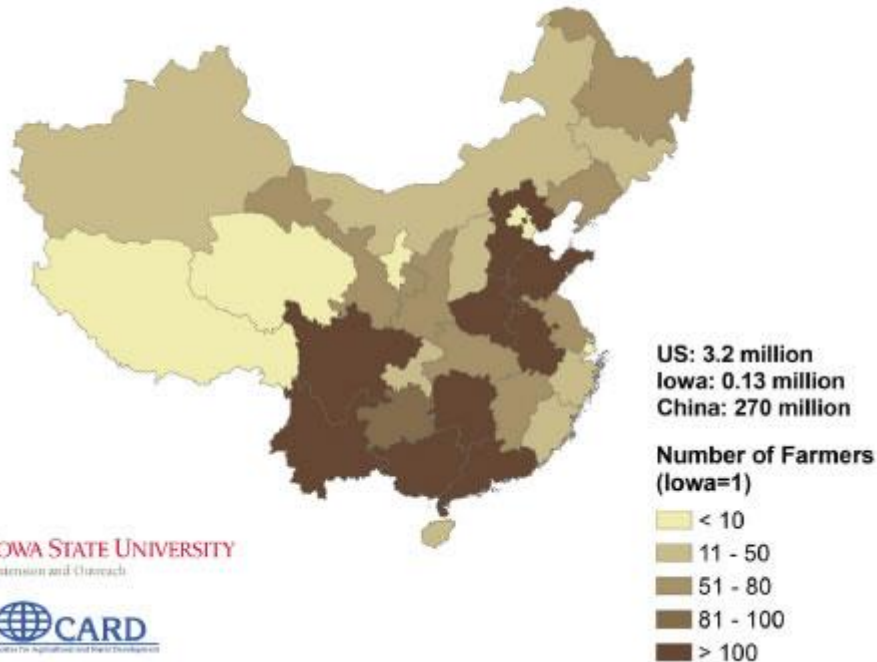
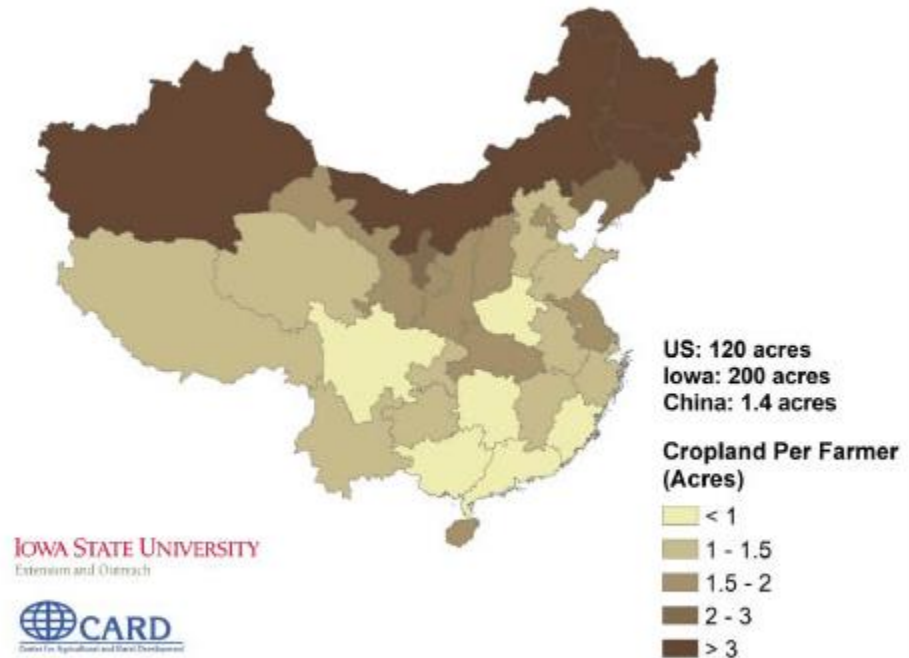
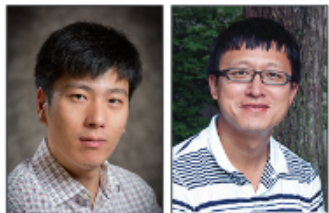


Figure 2. Crop land per farmer in China in acres



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.



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



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

发包方 全称	美兰县灵山乡 (盖章)			承包地总 面积(亩)	3.05	承包地块 总数(块)	8块
承包方代 表姓名	吴乾洪			地块 名称	面积 (亩)	等 级	地 类
承包方 住址	美兰县灵山乡灵山村村委会			承包 地 块 情 况			东至: 水沟 南至: 乾东 西: 亚花 北: 清明
土地承包 合同编号				秧田	0.32		水田
承包期限	1998年1月1日至2027年12月31日止			苏管井	0.67		:
承包方式	家庭承包			桑子田	0.76		:
承包土 地用途	农业用地			公路园	0.32		:
承包方土地承包经营权共有人情况				秧田	0.35		:
姓名	性别	年龄	姓名	性别	年龄		
吴乾洪	男	51					
林程兰	女	54					
吴坤森	男	24					
吴亚玉	女	23					

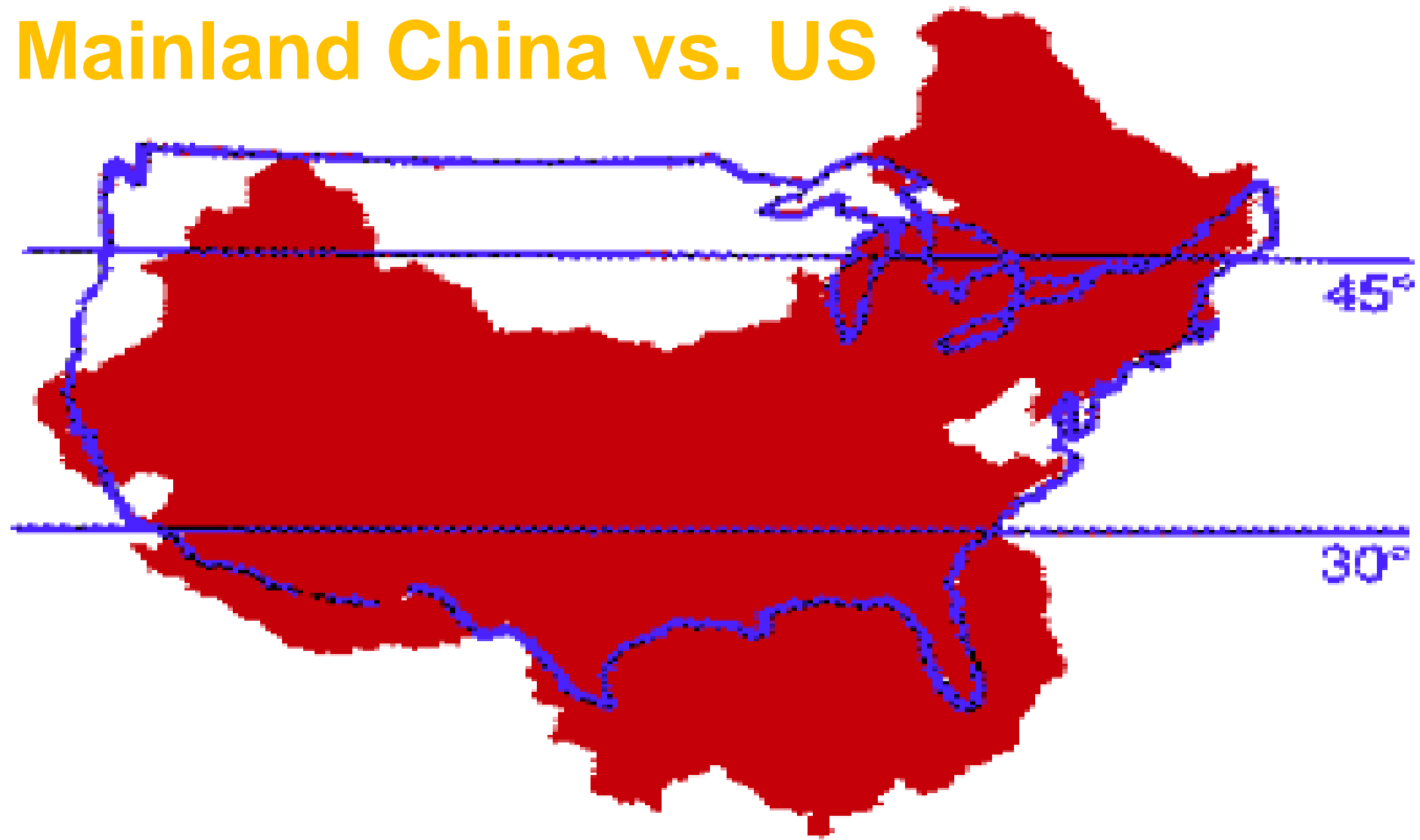
China's New Rural Land Transfer Reform

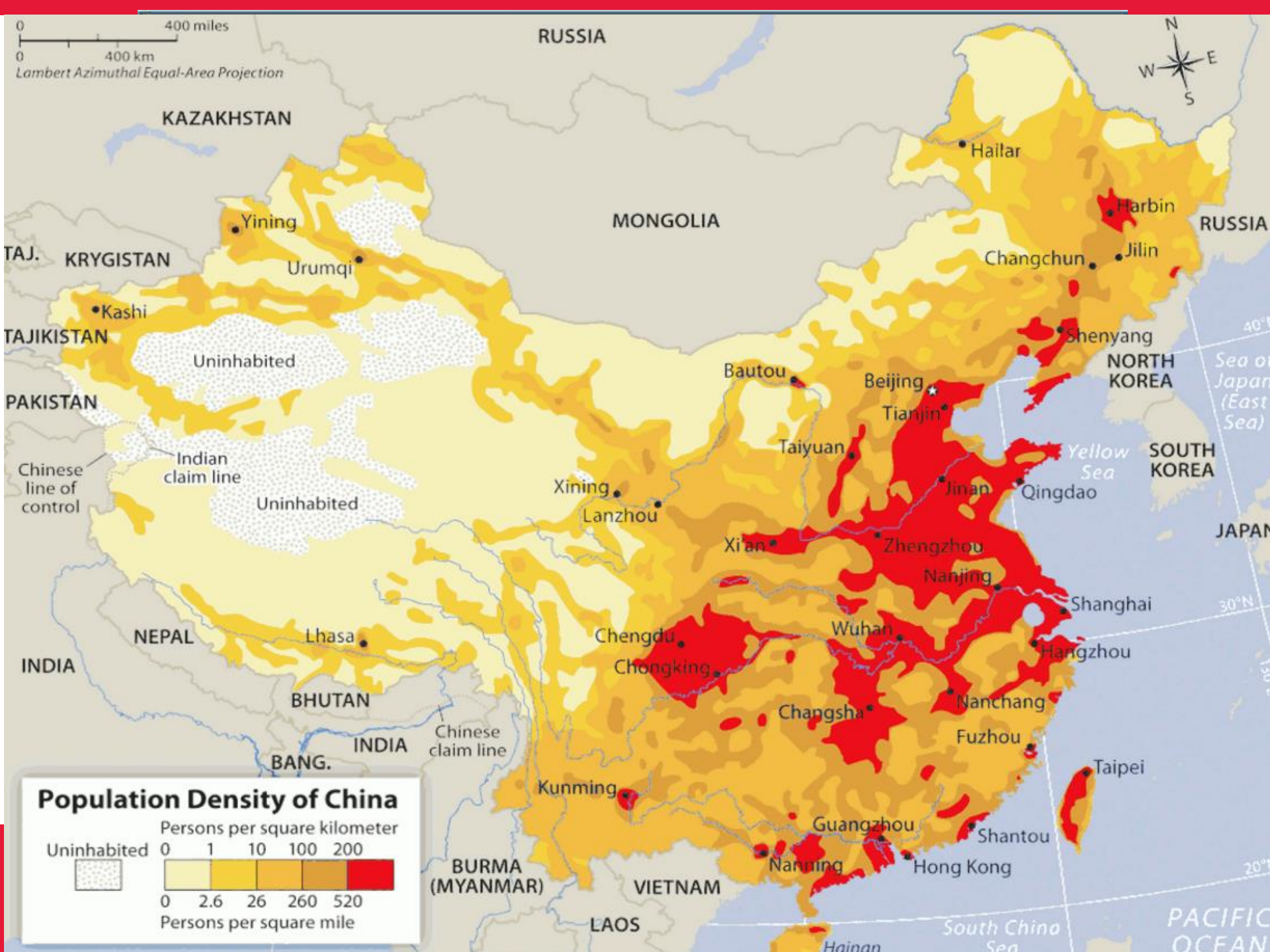
2016:
77 million acres (35% of cropland) transferred;
2007: 5%

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

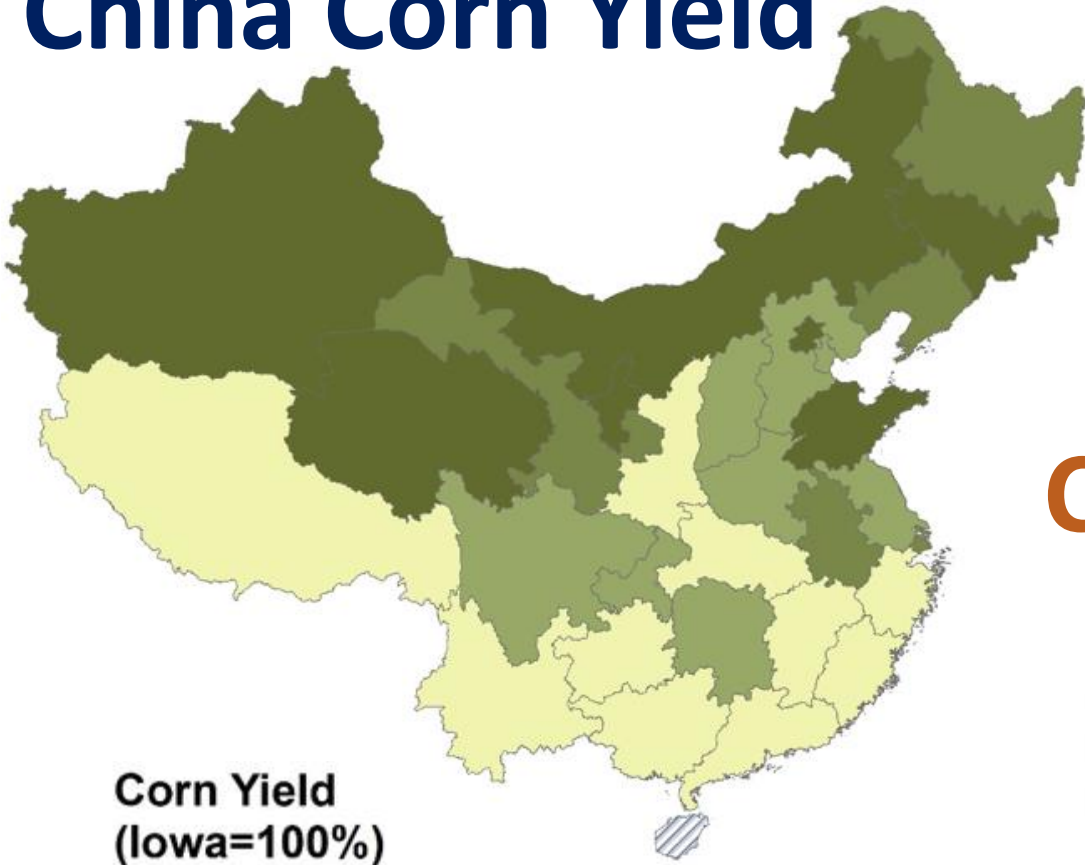
Minghao Li, Wendong Zhang, and Dermot Hayes. 2018. "Can China's Rural Land Policy Reforms Solve its Farmland Dilemma?" *Agricultural Policy Review*. Center for Agricultural and Rural Development, Iowa State University.

Mainland China vs. US





China Corn Yield



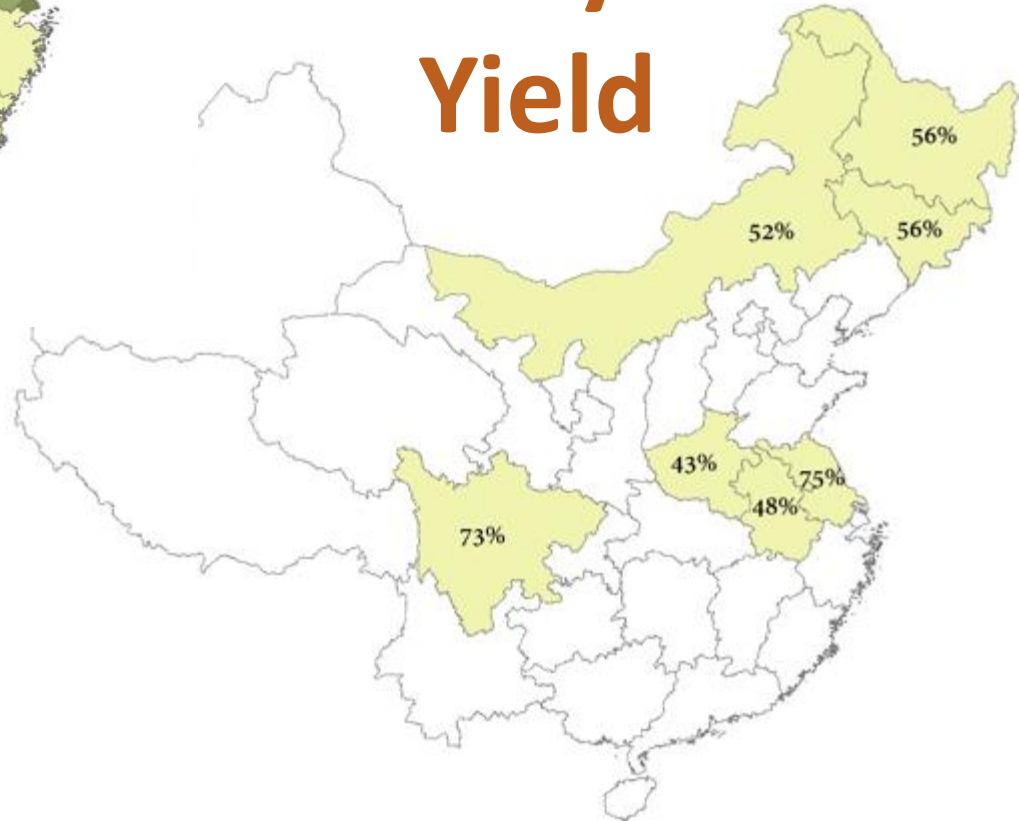
Corn Yield
(Iowa=100%)

- No data
- 11% - 40%
- 41% - 45%
- 46% - 50%
- 51% - 60%

2015 Soybean Yield

US: 48 Bu/acre
Iowa: 56 Bu/acre
China: 26 Bu/acre

China Soybean Yield



Trump and Xi Are Close to a Deal, But the Trade War Isn't Over

Bloomberg

By [Jenny Leonard](#)

March 4, 2019, 3:00 PM CST

Updated on March 5, 2019, 5:05 AM CST

- ▶ U.S. confirms postponement of planned increase in tariffs
- ▶ Enforcement of Chinese commitments will be key to agreement

Some advisers argue that the tariffs should only be fully removed once China lives up to all of its pledges, which could take months or even years. Even if some or most tariffs are removed at the outset they could come back as part of the enforcement mechanism, to punish China if it breaks the terms of any trade deal, Lighthizer said last week.

Enforcement Piece

Lighthizer has said the two countries plan to set up a system that requires regular consultations at various levels of the U.S. and Chinese governments to address irritants. If talking doesn't yield progress, Lighthizer said the U.S. will respond with "proportional" and "unilateral" action, likely referring to tariffs.

Soybean Solution

While Lighthizer has emphasized that he's seeking a deal that's more than what he dubbed a "soybean solution," significant amounts of purchases are on the table in the talks.

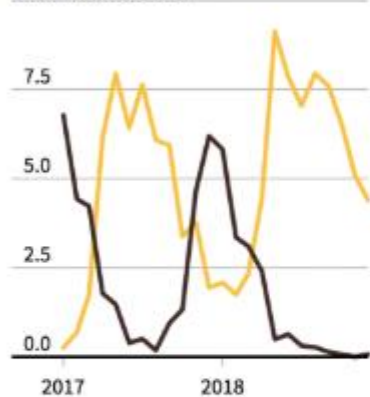
China has offered to increase purchases of U.S. goods by \$1.2 trillion over six years, benefiting agriculture and energy. That would help sell the deal to the president who has pledged to reduce the chronic U.S. trade deficit with Beijing.

But Lighthizer and his team are more focused on China making structural changes to its intellectual property practices and policies that require U.S. companies to transfer their technology to Chinese entities as a condition of doing business in the country.

CHINA'S SOYBEAN IMPORTS VOLUME

— U.S. — Brazil

10.0 million tonnes

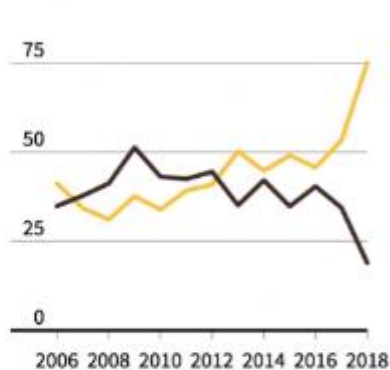


Sources: China Customs; Refinitiv Eikon; Reuters

CHINA'S SOYBEAN IMPORTS SHARE

— U.S. — Brazil

100%



Donald J. Trump ✓

@realDonaldTrump



I am pleased to report that the U.S. has made substantial progress in our trade talks with China on important structural issues including intellectual property protection, technology transfer, agriculture, services, currency, and many other issues. As a result of these very.....

♥ 111K 4:39 PM - Feb 24, 2019



💬 30.4K people are talking about this



Donald J. Trump ✓

@realDonaldTrump



....productive talks, I will be delaying the U.S. increase in tariffs now scheduled for March 1. Assuming both sides make additional progress, we will be planning a Summit for President Xi and myself, at Mar-a-Lago, to conclude an agreement. A very good weekend for U.S. & China!

♥ 107K 4:50 PM - Feb 24, 2019



💬 34.8K people are talking about this



BUSINESS NEWS JANUARY 30, 2019 / 6:58 AM / UPDATED 7 HOURS AGO

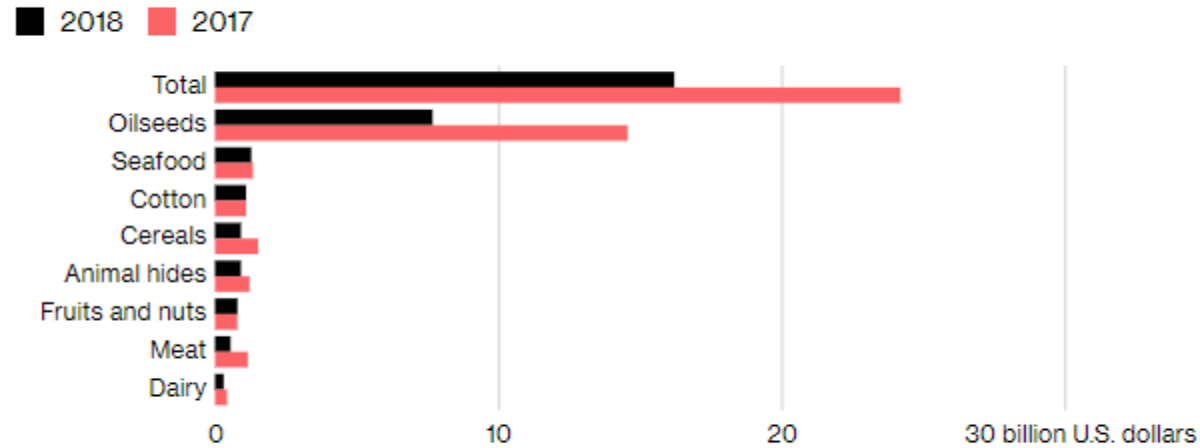
U.S., China launch high-level trade talks amid deep differences



U.S. Trade Representative Robert Lighthizer (2ndR) speaks across from China's Vice Premier Lie He (L) during the opening of US-China Trade Talks in the Eisenhower Executive Office Building at the White House in

Farmers' Loss

China's agricultural imports from the U.S. slump due to the trade spat



Sources: China Customs Administration, Bloomberg

Donald J. Trump @realDonaldTrump · Mar 1, 2019
I have asked China to immediately remove all Tariffs on our agricultural products (including beef, pork, etc.) based on the fact that we are moving along nicely with Trade discussions....

Donald J. Trump @realDonaldTrump
...and I did not increase their second tranch of Tariffs to 25% on March 1st. This is very important for our great farmers - and me!

104K 5:08 PM - Mar 1, 2019

30.2K people are talking about this

Donald J. Trump @realDonaldTrump

China Trade Deal (and more) in advanced stages. Relationship between our two Countries is very strong. I have therefore agreed to delay U.S. tariff hikes. Let's see what happens?

80K 2:12 PM - Feb 25, 2019

22.3K people are talking about this

Donald J. Trump @realDonaldTrump

If a deal is made with China, our great American Farmers will be treated better than they have ever been treated before!

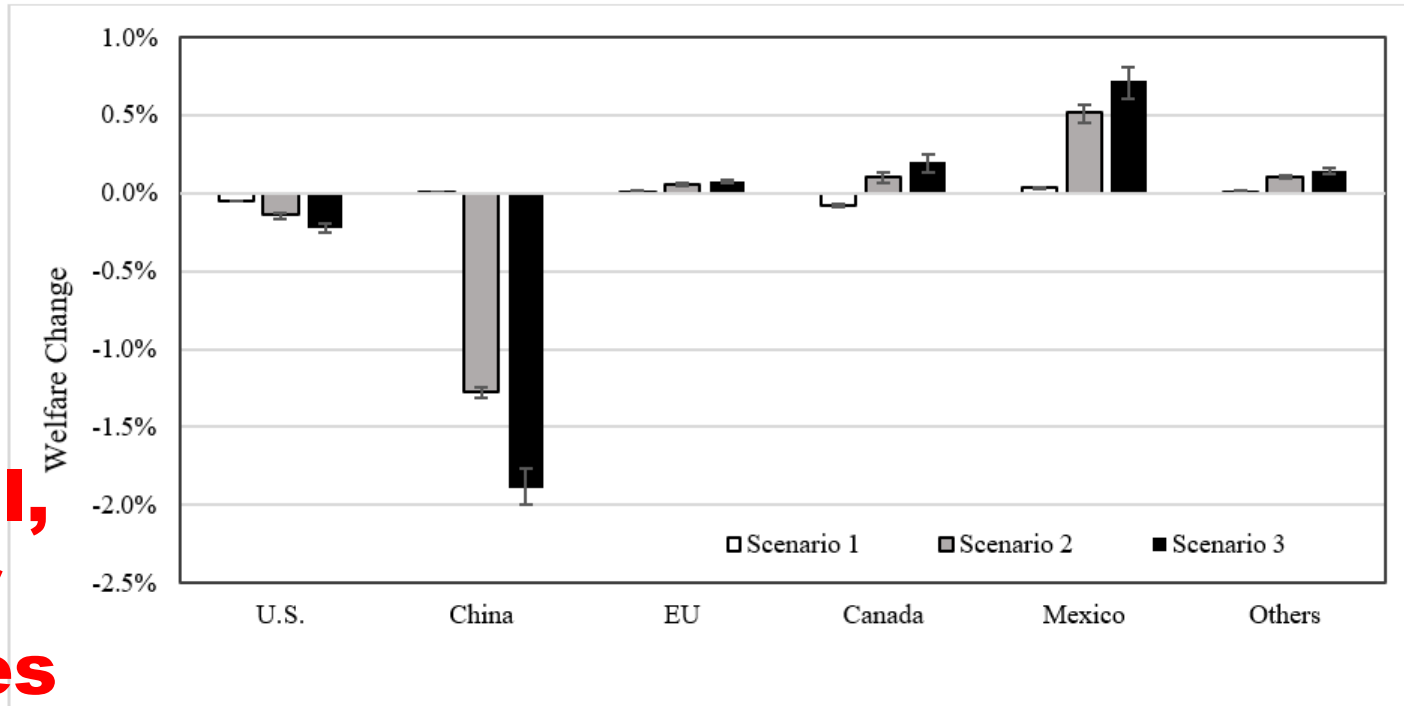
112K 6:04 PM - Feb 25, 2019

33.8K people are talking about this

Minghao Li, Edward J. Balistreri, Wendong Zhang

December 2018 [18-WP 587]

Figure 1. Welfare changes in selected countries.



Scenario 2: Tariff increases in scenario 1 and additional tariff increases between the United States and China, including the \$50 billion round and the \$200 billion/\$60 billion round of tariff increases. The scenario reflects the current tariffs (as in October 2018).

Scenario 3: Tariff increases in scenario 1 and 2, and additional tariff increases that are scheduled to happen at the end of 2018, i.e., the U.S. tariffs on \$200 billion Chinese products will increase by another 15%, and China's retaliatory tariffs will increase by 0~15%.

**#2:
Why China
decided to
talk?
China
suffers
greater
economic
Loss overall,
but also for
US ag states
like Iowa**

September 2018
18-PB 25

The Impact of the 2018 Trade Disruptions on the Iowa Economy

- Overall losses in **Iowa's Gross State Product** are calculated to be \$1 to \$2 billion (off of a Gross State Product of \$190 billion).
- Overall losses to Iowa's **Soybean** industry of \$159 to \$891 million, with an average revenue loss across all models of \$545 million (Iowa soybeans are a \$5.2 billion industry).
- Overall losses to Iowa's **Corn** industry of \$90 to \$579 million, with an average revenue loss across all models of \$333 million (Iowa corn is an \$8.5 billion industry).
- Overall losses to Iowa's **Pork/Hog** industry of \$558 to \$955 million, with an average revenue loss across all models of \$776 million (the Iowa pork/hog industry is a \$7.1 billion industry).
- A 2% drop in **Ethanol** prices resulting in approximately \$105 million in lost revenues to Iowa ethanol producers.
- Revenue losses in these industries translate into **additional lost labor income** across the state. Labor income declines from the impacts to the corn, soybean, and hog industries range from \$366 to \$484 million without federal offsets and \$245 to \$364 million with federal offsets.
- Iowa **tax revenue losses** (personal income and sales taxes) range from \$111 to \$146 million. Federal offsets would reduce tax losses to \$75 to \$110 million.

#3: Trade disruptions give China strategic incentives to further diversify away from U.S., potentially benefitting our competitors

Commodity (2016 value of China ag imports)	USA	Brazil	Europe	Australia	Argentina or Uruguay
Soybean (\$34.4 Bil.) (China increased production by 9% in 2018)	38%	47%			A-10%
Pork (\$2.32 Bil.)	13%		50%	Canada: 11%	
Ethanol (\$0.38 Bil.)	70%	11%	Pakistan 15%		
Beef (\$2.42 Bil.)	0%	22%		28%	U-21%
Poultry (\$1.11 Bil.)		79%			A-9%
Corn (\$0.87 Bil.)	10%	Ukraine: 79%			

China's Ag Import Sources

China can produce 97% of its pork, but only 15% of its soybean demand domestically
 China provided about US\$200/acre subsidy to increase soy production (up 9% 2018)

What Have We Learned from China's Past Trade Retaliation Strategies?

Minghao Li, Wendong Zhang, and Chad Hart

JEL Classifications: Q17, F10

Keywords: Agricultural Commodities, China, Tariff, Trade Retaliation

Proportional, Restrained Response

Currently, China has a huge overall trade surplus with the United States, and thus naturally has an incentive to maintain the status quo and avoid dispute escalations. As the two cases above demonstrate, China has targeted U.S. agricultural commodities with trade flows comparable to U.S. targets in order to send a clear message.

Target Products That Are Substitutable

In these two cases, China chose commodities that are easily substitutable across production and domestic production. Half of the U.S. broiler products were chicken feet, a replacement for which is commonly used for feed and can be replaced by corn or other coarse grains. In terms of

Inflict Economic and Political Costs

From the perspective of China's government, the ultimate goal of retaliatory tariffs is to pressure politically influential interest groups in the United States, turning them into lobbyists. For retaliation measures to be effective, China's market as an export destination for U.S. products must be important for U.S. producers, as is the case for broiler products and sorghum. Furthermore, the U.S. government has long recognized the political significance of the U.S. agricultural industry, which is why it targets U.S. agricultural exports in trade spats.

UPDATE 1-CHINA SAYS NEW ANIMAL FEED STANDARDS WILL CUT CHUNK OUT OF APPETITE FOR SOY

10/28/2018

China's Feed Industry Association on Friday approved new standards for feed for pigs and chickens, lowering the protein levels in pig feed by 1.5 percentage points and those for chickens by one percentage point, the agriculture ministry said in a statement that day. It did not say when the new standards would take effect.

The ministry also said in the statement that China's overall yearly consumption of soymeal would fall by 11 million tonnes. The country used 71 million tonnes of soymeal to make animal feed in the 2017-18 crop year.

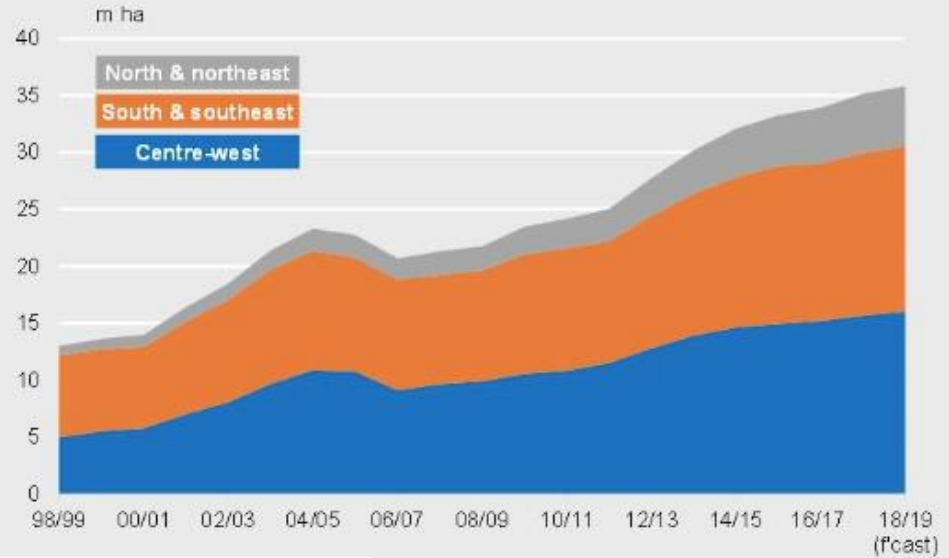


Bolsonaro wins Brazilian presidency

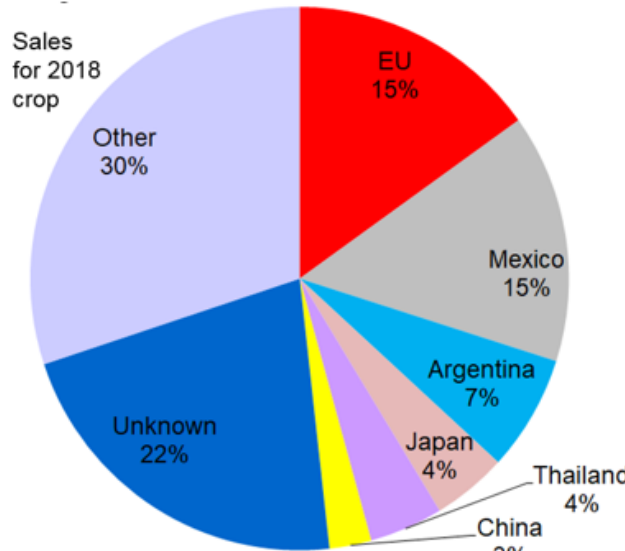
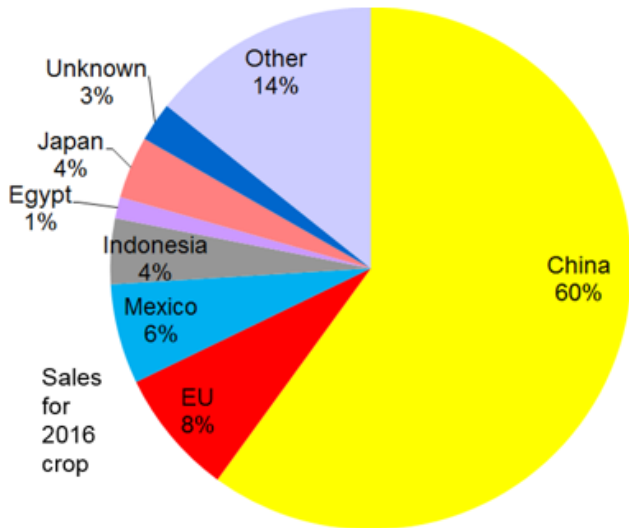
The former military officer is the latest in a global wave of far-right nationalists to surge at the ballot box.

washingtonpost.com

Soybeans: Brazilian area by region*

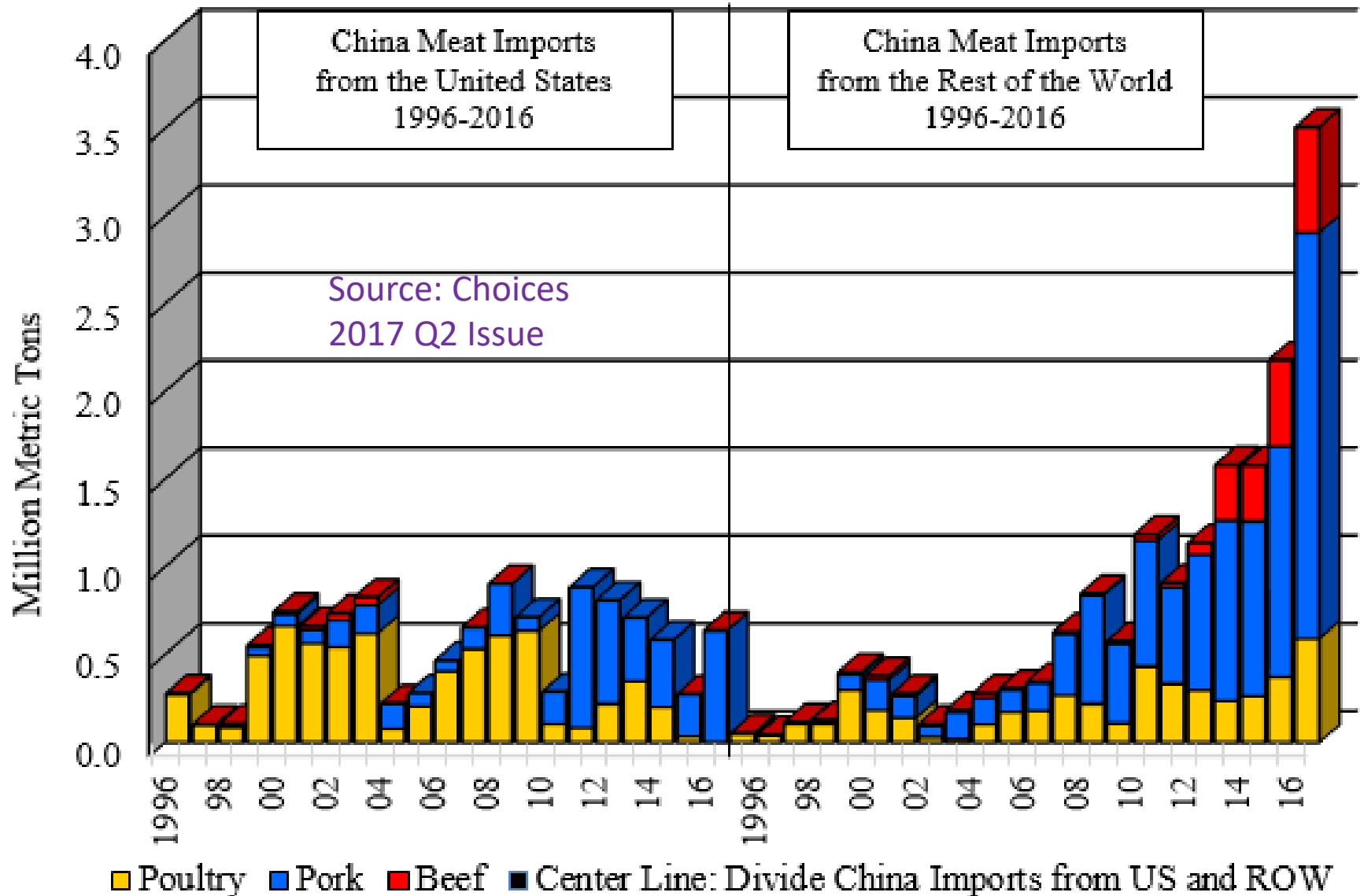


Soybean Export Market Share (2016 crop vs. 2018 crop)

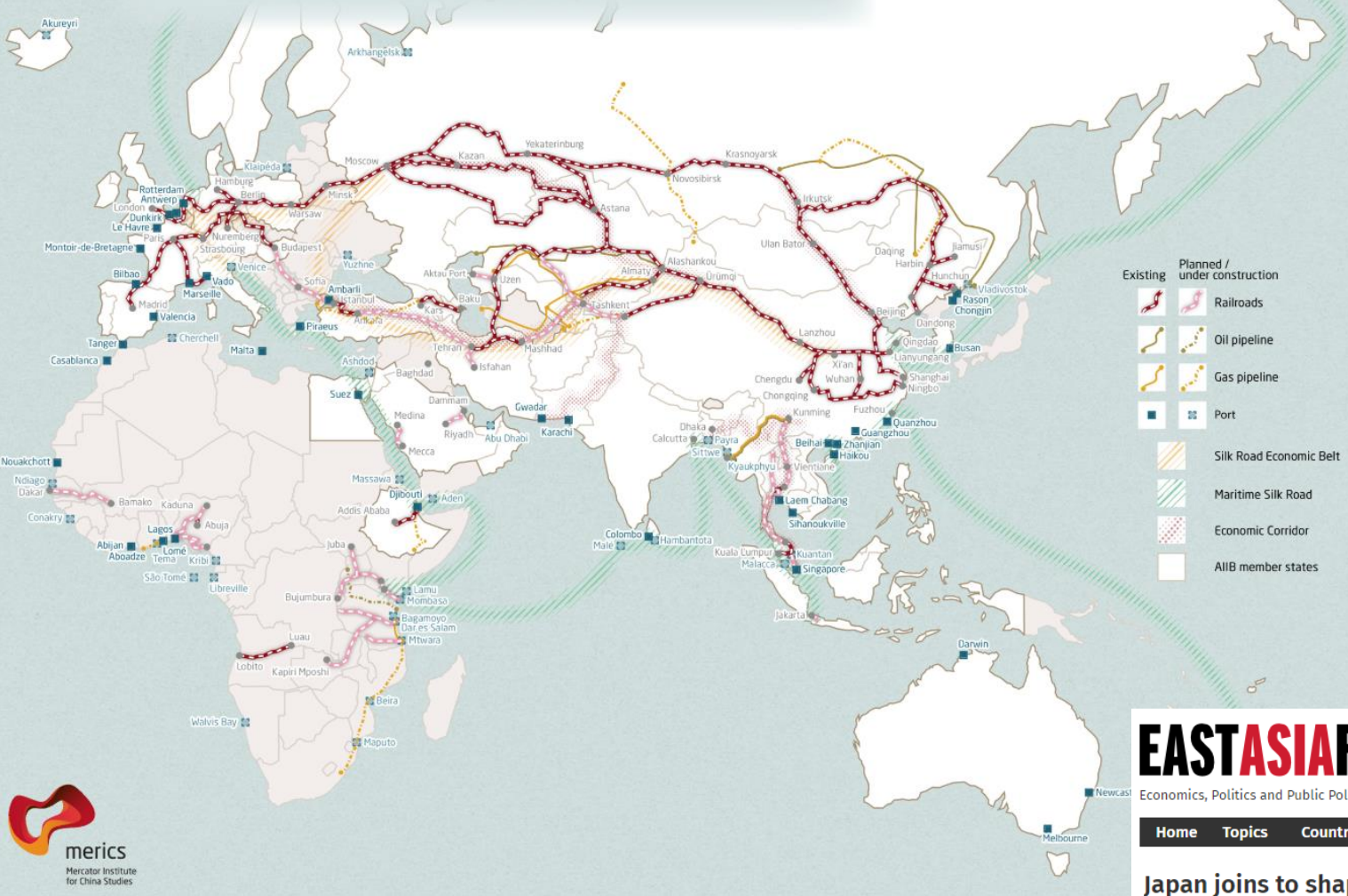


Soy Stats Worrying

US Loses Market Share as China Increases Meat Imports from the World



The Belt and Road Initiative creates a global infrastructure network
 China uses, acquires and builds railroads, ports and pipelines



China's Belt and Road Initiative



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Japan joins to shape China's Belt and Road
 28 October 2018
 Author: Shiro Armstrong, ANU

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Structural impacts of trade war

Chinese Ag Policy Presents Future Demand that could be filled by our competitors

Minghao Li, Wendong Zhang, Dermot Hayes, Riley Arthur, Yantao Yang, and Xiudong Wang. 2017. ["China's New Nationwide E10 Ethanol Mandate and Its Global Implications."](#) *Agricultural Policy Review*. Center for Agricultural and Rural Development, Iowa State University.

China cannot produce enough ethanol domestically to fulfill the 2020 E10 ethanol mandate

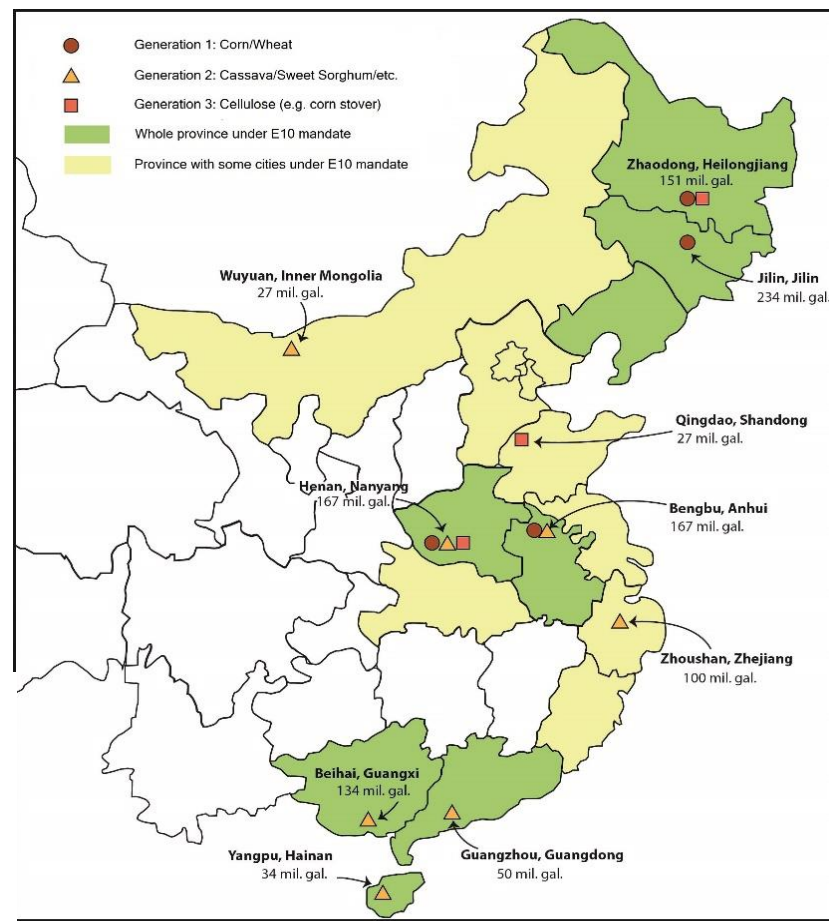
4th largest producer – 1 Bil gal.

- 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%

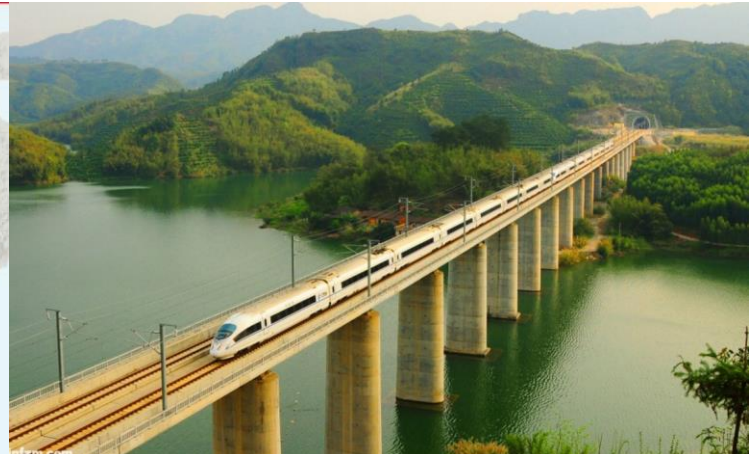
China consumes 40 bil. gal gasoline; 1 bil. gal ethanol in 2016

China sets 2020 target for nationwide ethanol use to cut corn stocks

China's Ethanol Trial



#5: China is a Country of Rapid Change



High Speed Rail

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

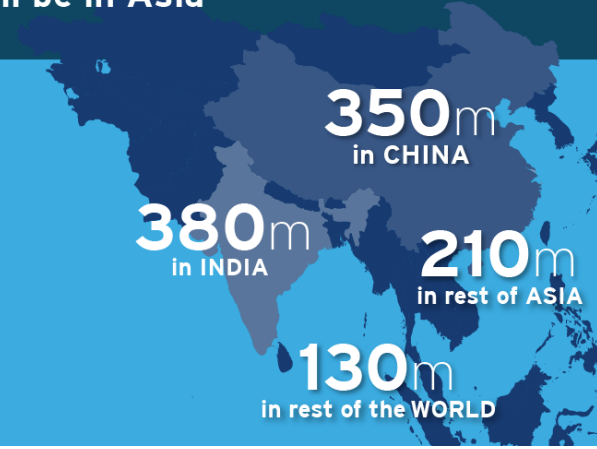
2016
 GDP per capita (PPP)
\$53,417
 United States
\$14,275
 China
 U.S. GDP per capita was
 3.7 times that of China

88 percent of the next billion entrants into the middle class will be in Asia

By 2030, Asia could represent 2/3 of the global middle class population.



BROOKINGS



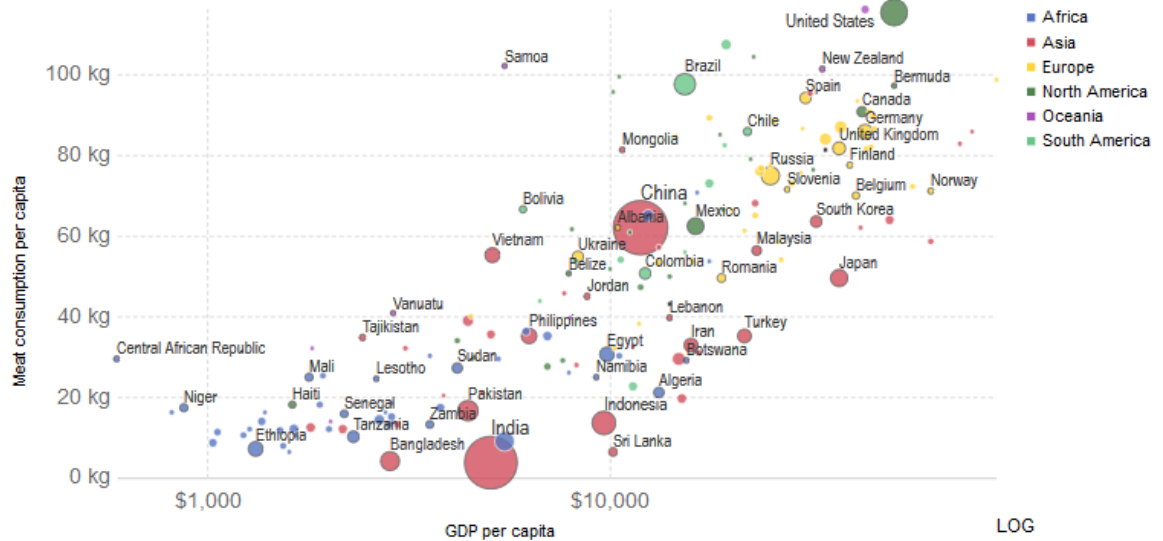
Bloomberg

Chinese People Are Getting Richer, and will need more protein and better environment

Meat consumption vs. GDP per capita, 2013

Average meat consumption per capita, measured in kilograms per year versus gross domestic product (GDP) per capita measured in 2011 international-\$. International-\$ corrects for price differences across countries. Figures do not include fish or seafood.

LINEAR



Source: UN FAO; World Bank, World Development Indicators

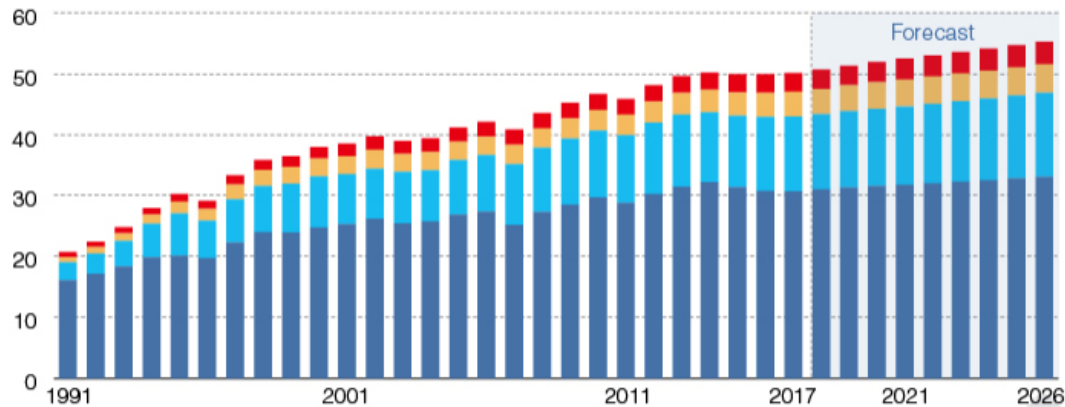
OurWorld in Data

CC BY-SA

A Meatier Middle Kingdom

■ Pork ■ Poultry ■ Beef and veal ■ Sheep

Unit: Kilograms per capita



Charts of the Day: China's Growing Meat Consumption



Source: 财新数据
Caixin Data

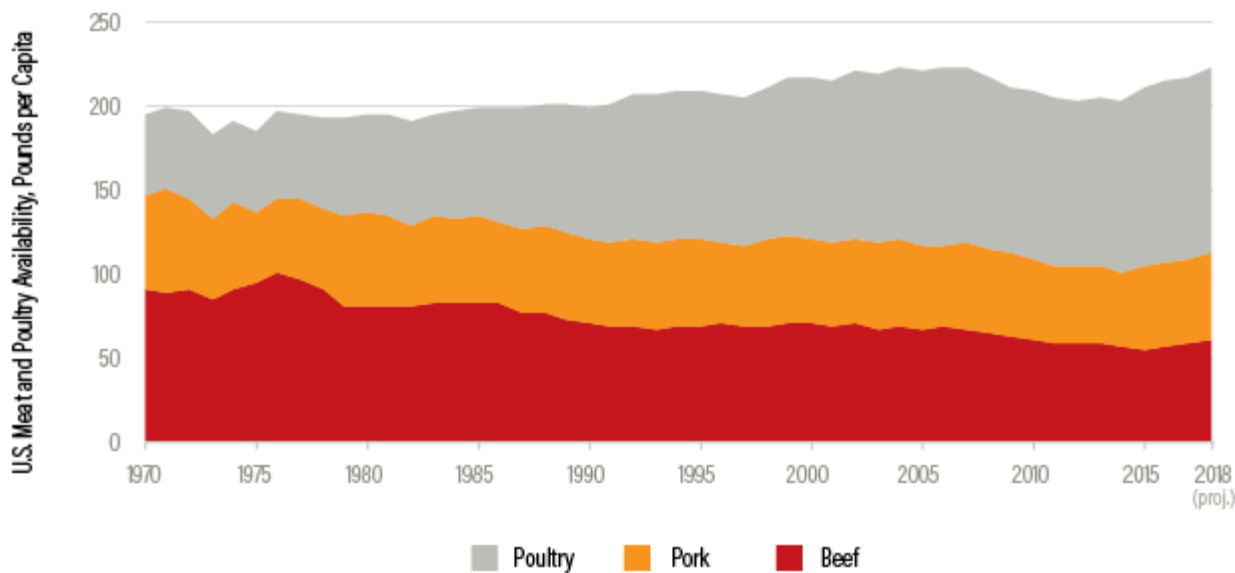
Original Sources: Organization for Economic Co-operation and Development, Food and Agriculture Organization of the United Nations

WORLD RESOURCES INSTITUTE

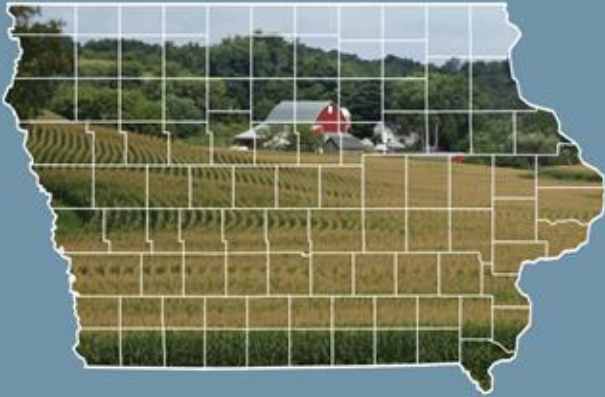
2018 Will See High Meat Consumption in the U.S., but the American Diet is Shifting

by  Richard Waite - January 24, 2018

U.S. Meat Consumption Has Shifted from Beef toward Chicken



Iowa Farmland Ownership and
Tenure Survey, 1982-2017:
A Thirty-Five Year Perspective



FA 1883 August 2018

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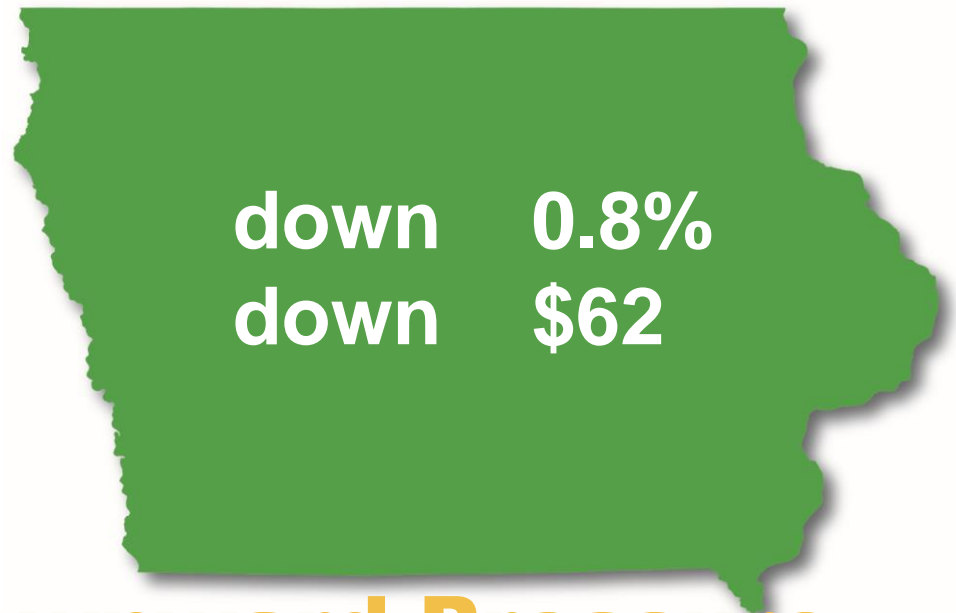
- 82% of Iowa land is debt-free
- 60% of land owned by owners 65+ years old, one-third of land owned by 75+ years old, 13% of land owned by women landowner 80+ years old
- Ownership continues to shift from sole ownership to trusts and corporations
- 53% of Iowa land rented out – mainly cash rent
- 34% of Iowa land owned by landlords with no farming experience, 23% of land owned by retired farmers who do not currently farm
- 29% of Iowa land owned primarily for family/sentimental reasons

(\$5 each print copy!)

<https://store.extension.iastate.edu/product/6492>

2018 IOWA LAND VALUE

\$7,264
Nov 2018

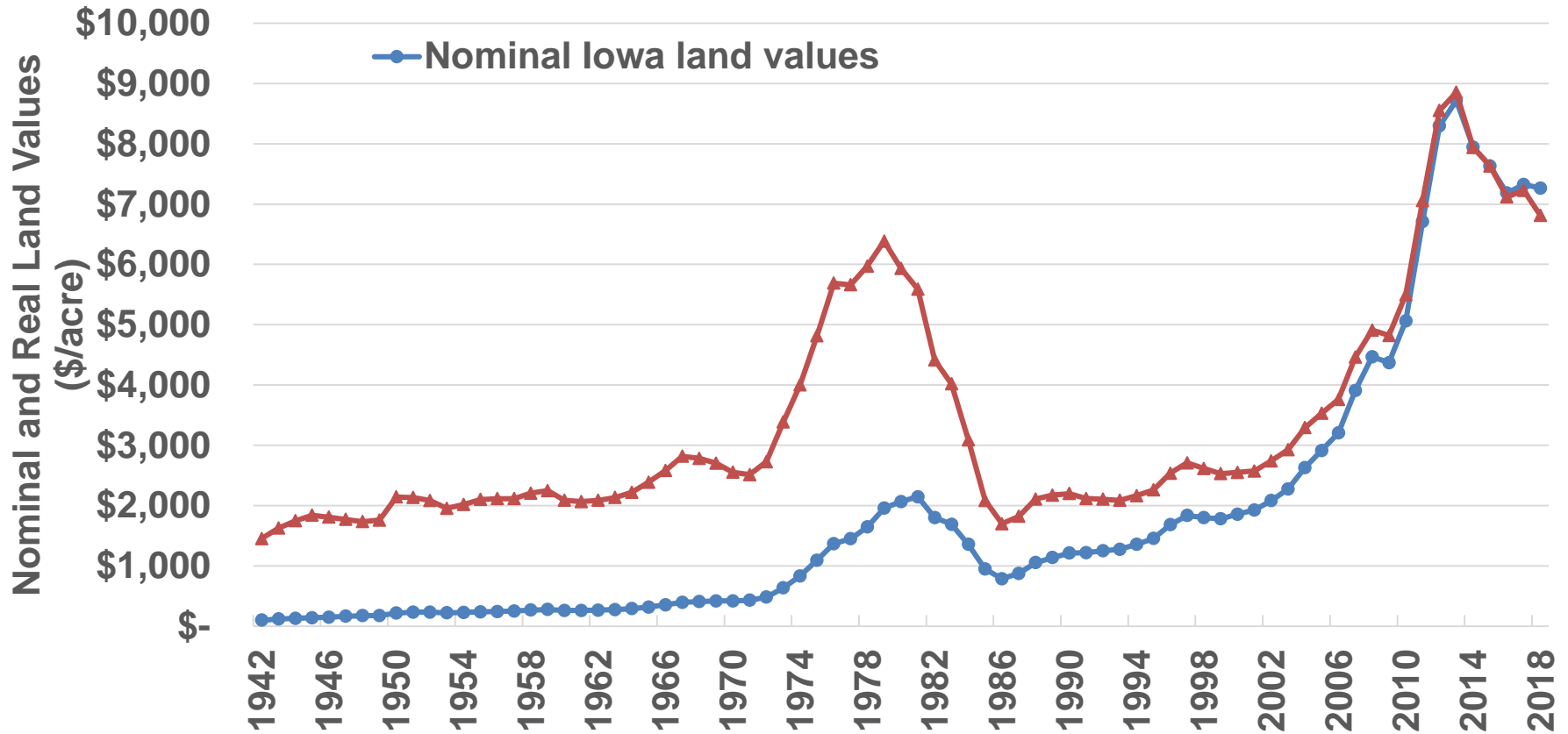


Double Downward Pressure

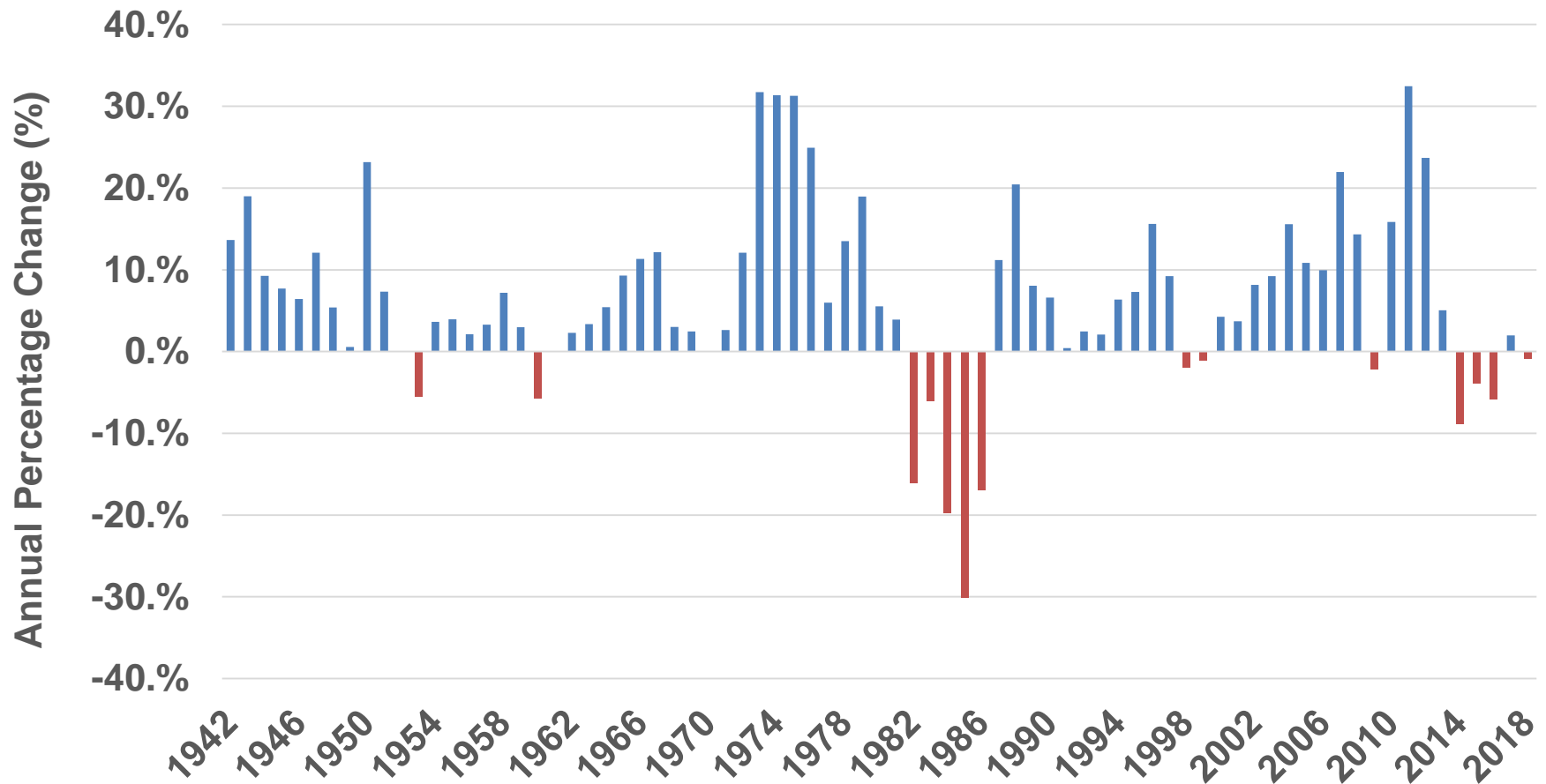
Land Value = income / interest rate

AVERAGE VALUES

all farmland 1941-2018



% Change in Nominal Iowa Farmland Values 1942-2018



Thank You!

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www.card.iastate.edu/farmland