Actual and Perceived Impacts of US-China Trade War on US Agriculture

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Ag Decision Maker

Seven things to know about China to understand the trade war

By Wendong Zhang, extension economist, 515-294-2536, wdzhang@iastate.edu

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**

https://www.extension.iastate.edu/agdm/articles/zhang/ZhaFeb19.html

#2:
Why China decided to talk?
China suffers greater economic Loss overall, but also for US ag states like Iowa
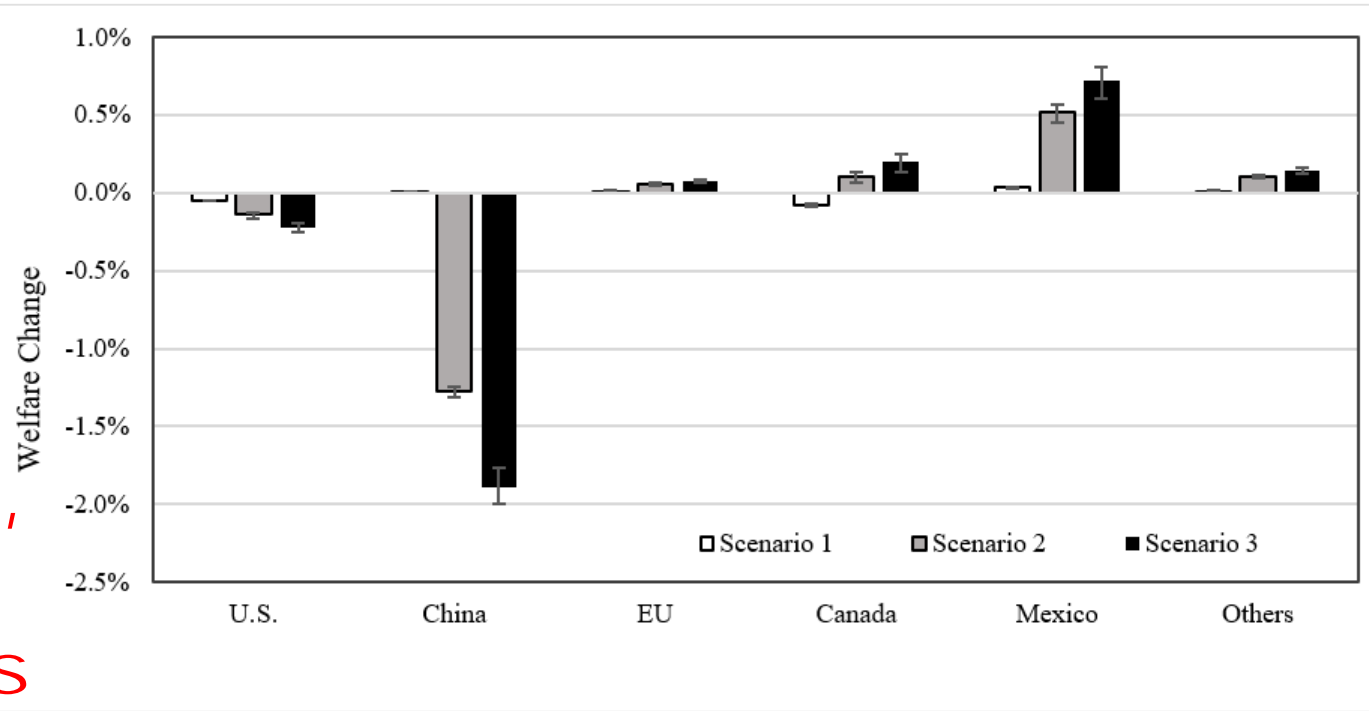
The 2018 Trade War: Data and Nascent General Equilibrium Analysis

Minghao Li, Edward J. Balistreri, Wendong Zhang

December 2018 [18-WP 587]
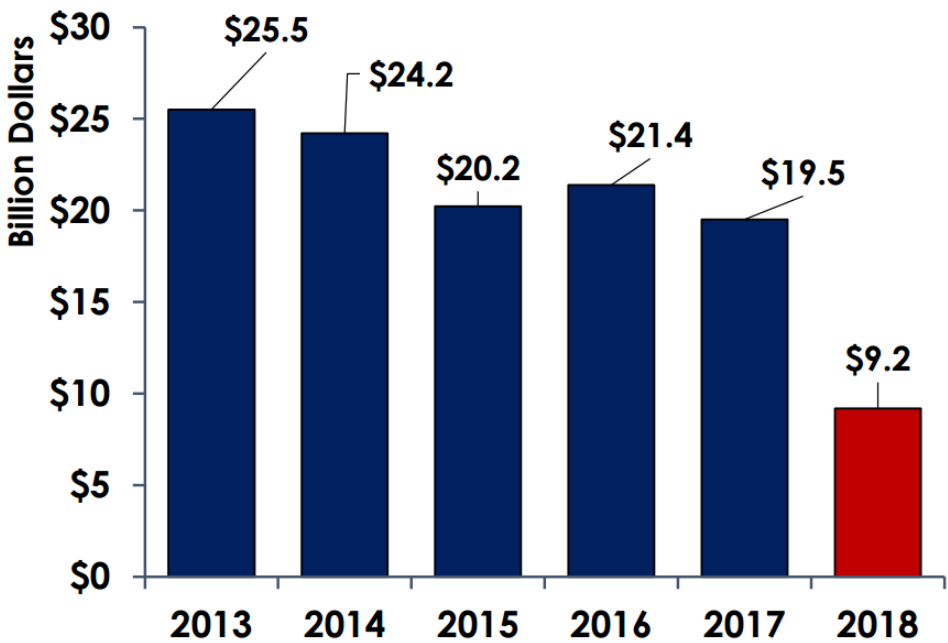
Figure 1. Welfare changes in selected countries.

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%.
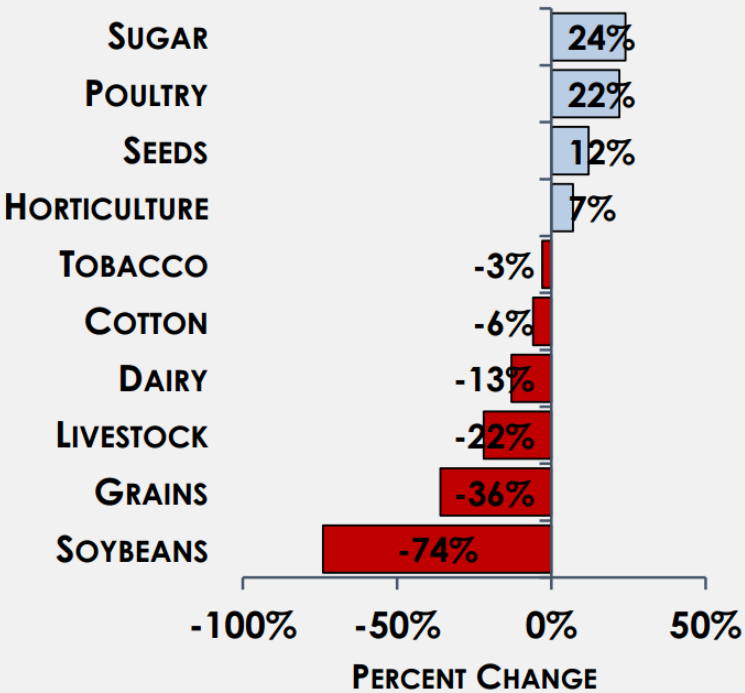
#TradeWar Was, and Is, More Than Soybeans

Total Agricultural Exports to China Down $10 Billion in 2018

Bar chart — Billion Dollars:
- 2013: $25.5
- 2014: $24.2
- 2015: $20.2
- 2016: $21.4
- 2017: $19.5
- 2018: $9.2

Year-Over-Year Change in U.S. Agriculture Exports to China
2018 Compared to 2017

Horizontal bar chart — Percent Change:
- SUGAR: 24%
- POULTRY: 22%
- SEEDS: 12%
- HORTICULTURE: 7%
- TOBACCO: -3%
- COTTON: -6%
- DAIRY: -13%
- LIVESTOCK: -22%
- GRAINS: -36%
- SOYBEANS: -74%

The Impact of the 2018 Trade Disruptions on the Iowa Economy

Edward J. Balistreri, Chad E. Hart, Dermot J. Hayes, Minghao Li, Lee Schulz, David A. Swenson, Wendong Zhang, John M. Crespi
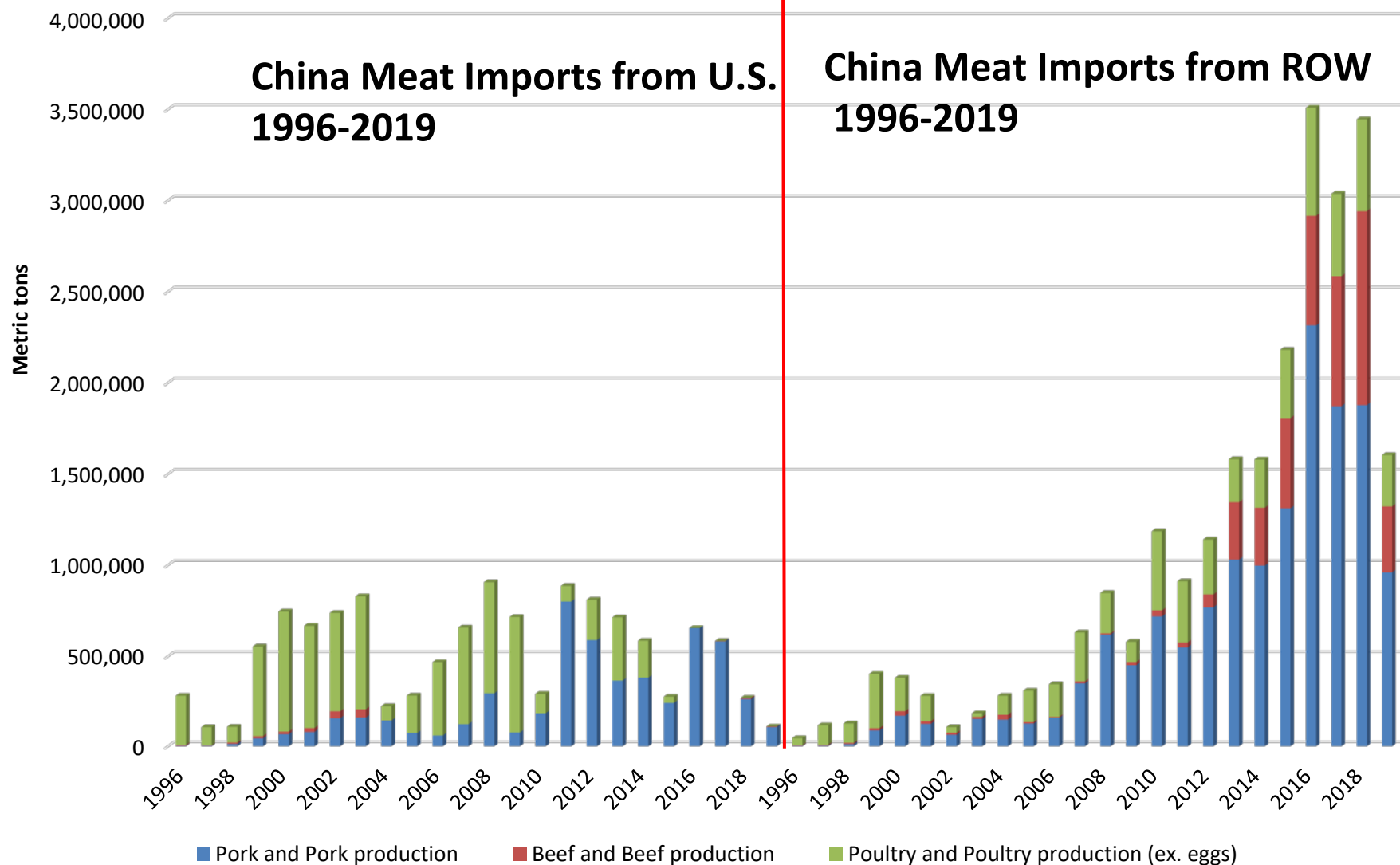
- Overall losses in Iowa's **Gross State Product** are calculated to be $1 to $2 billion (off of a Gross State Product of $190 billion).
- Overall losses to Iowa's **Soybean** industry of $159 to $891 million, with an average revenue loss across all models of $545 million (Iowa soybeans are a $5.2 billion 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. & take advantage of new Chinese import demands, potentially benefitting US ag 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 2016

# China's increasing diversification away from U.S. meat imports

China Meat Imports from U.S. 1996-2019

China Meat Imports from ROW 1996-2019

Metric tons

Legend: Pork and Pork production | Beef and Beef production | Poultry and Poultry production (ex. eggs)

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Xiong and Zhang
2019 Ag DM

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US didn't get the lion's share from China's demand due to ASF

China's Pork & Hog Imports from the World (Metric Ton)

Legend: USA, Germany, Spain, Canada, Denmark, France, UK, Chile, Others

Y-axis: China's Pork Imports (metric tons), 0 to 200000

X-axis: 201801, 201802, 201803, 201804, 201805, 201806, 201807, 201808, 201809, 201810, 201811, 201812, 201901, 201902, 201903, 201904, 201905
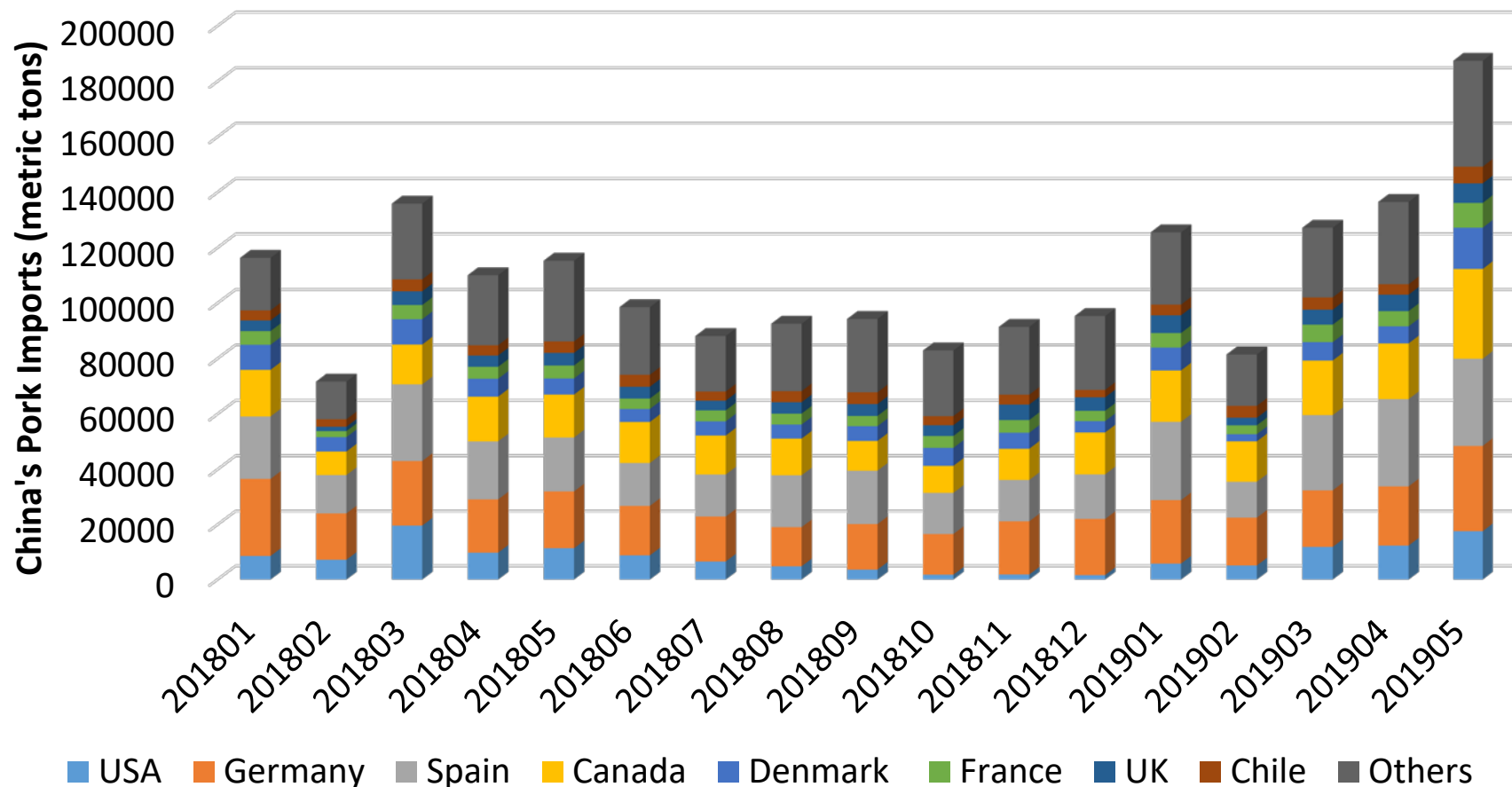
The Belt and Road Initiative creates a global infrastructure network
China uses, acquires and builds railroads, ports and pipelines
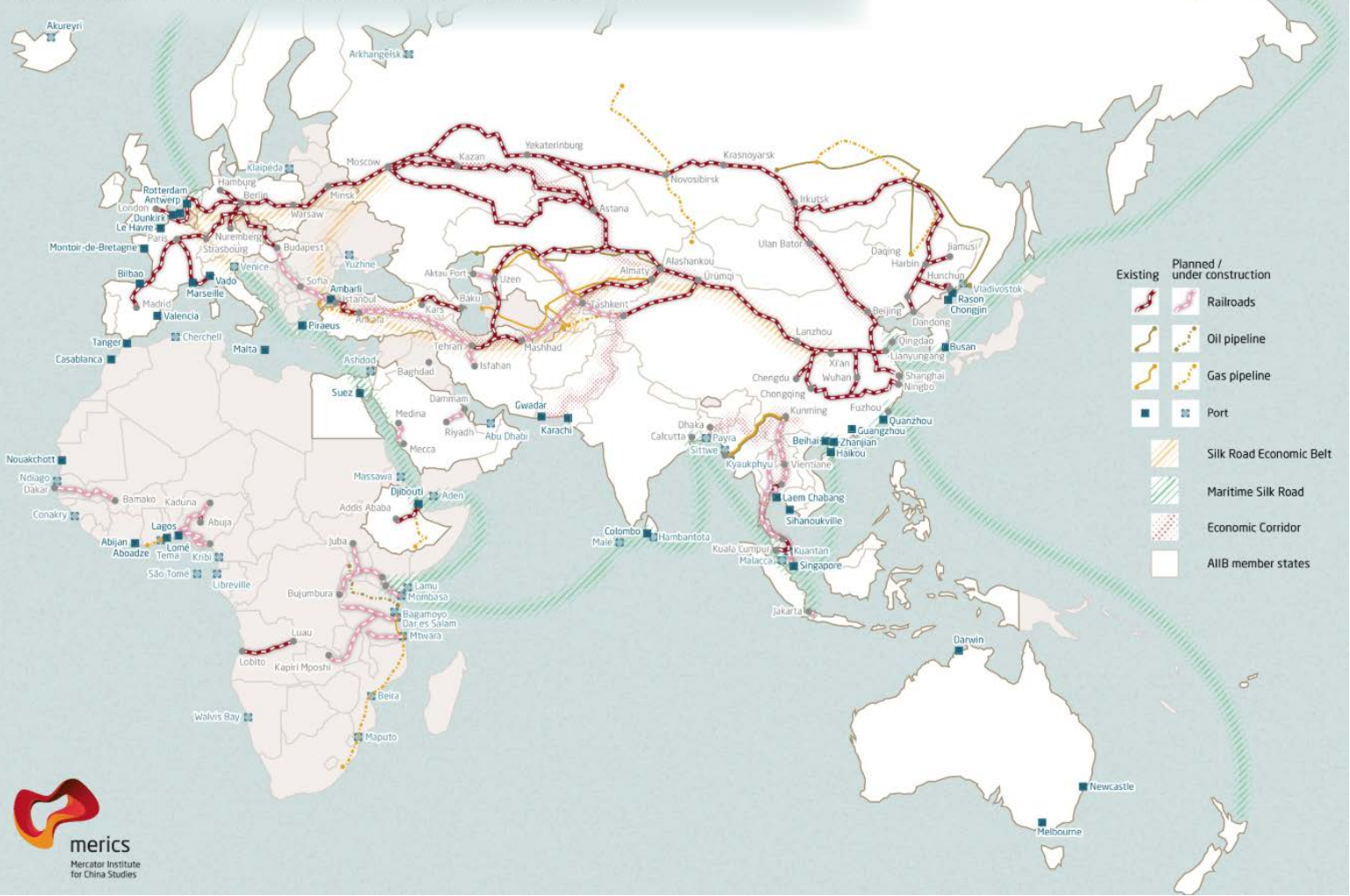
China's Belt and Road Initiative

Started in 2013/4

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Midwest Farmer Trade Disruption Perception Survey

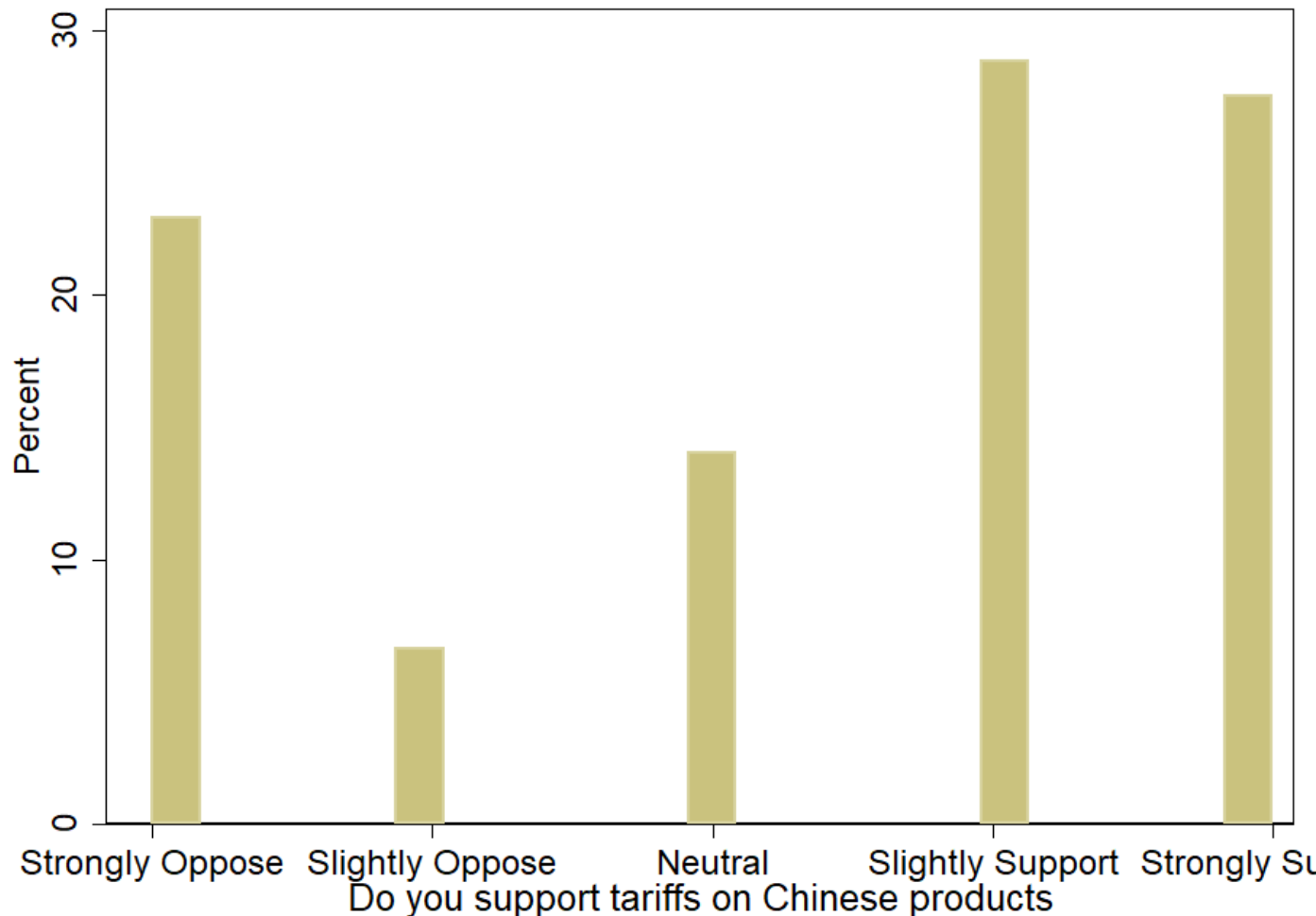**More than half of IA, IL, MN farmers support tariffs on China**

Collaborators:
Shuyang Qu
Minghao Li
Lulu Rodriguez
Guang Han

Bar chart titled "Do you support tariffs on Chinese products" with y-axis labeled "Percent" (0 to 30) and x-axis categories: Strongly Oppose, Slightly Oppose, Neutral, Slightly Support, Strongly Su[pport]

26. President Trump announced a Market Facilitation Program to help farmers affected by the trade disruptions in 2018. To the best of your knowledge, what was the payment rate for soybean producers?

a. 1 cent per bushel
b. 14 cents per bushel
c. 86 cents per bushel
d. $1 per bushel
e. $1.65 per bushel

79% know MFP payment level

27. ***Before receiving trade assistance from the USDA,*** to what extent do you think your farm's net income in 2018 was affected by the trade disruptions?

a. Down > 20%
b. Down 10%–20%
c. Down 5%–10%
d. Down < 5%
e. No change
f. Up < 5%
g. Up 5%–10%
h. Up 10%–20%
i. Up > 20%

30% saw income drop >20%
40% saw income drop 10-20%
20% saw income drop <10%
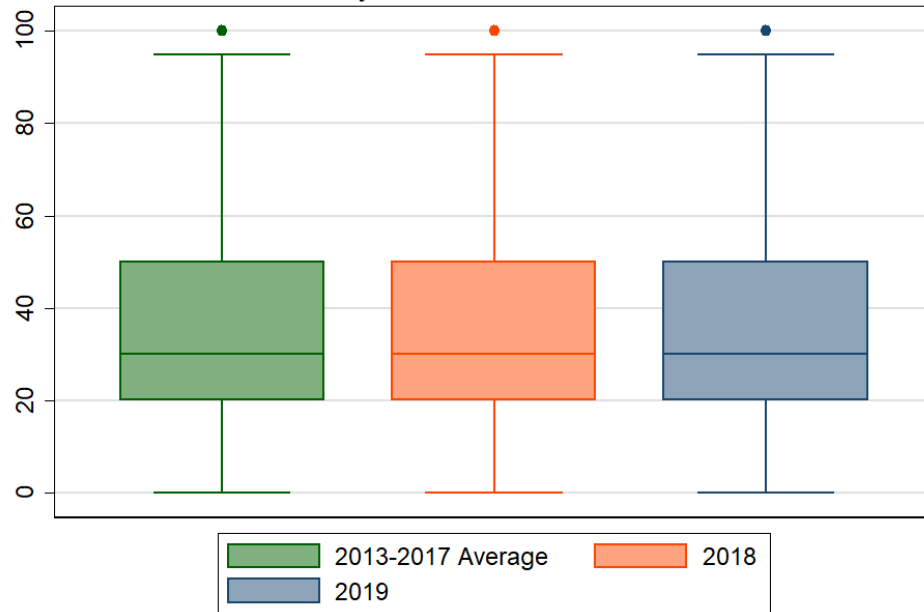
28. How helpful do you think President Trump's $12 billion trade relief plan will be to your farm?

a. Not at all helpful
b. Somewhat helpful
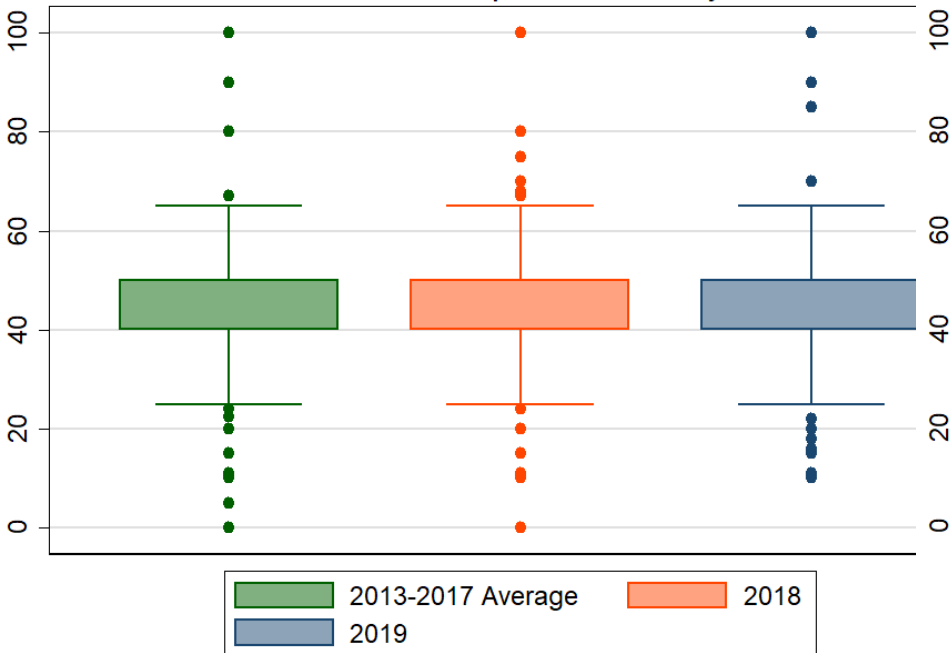c. Quite helpful
d. Very helpful
e. Not sure

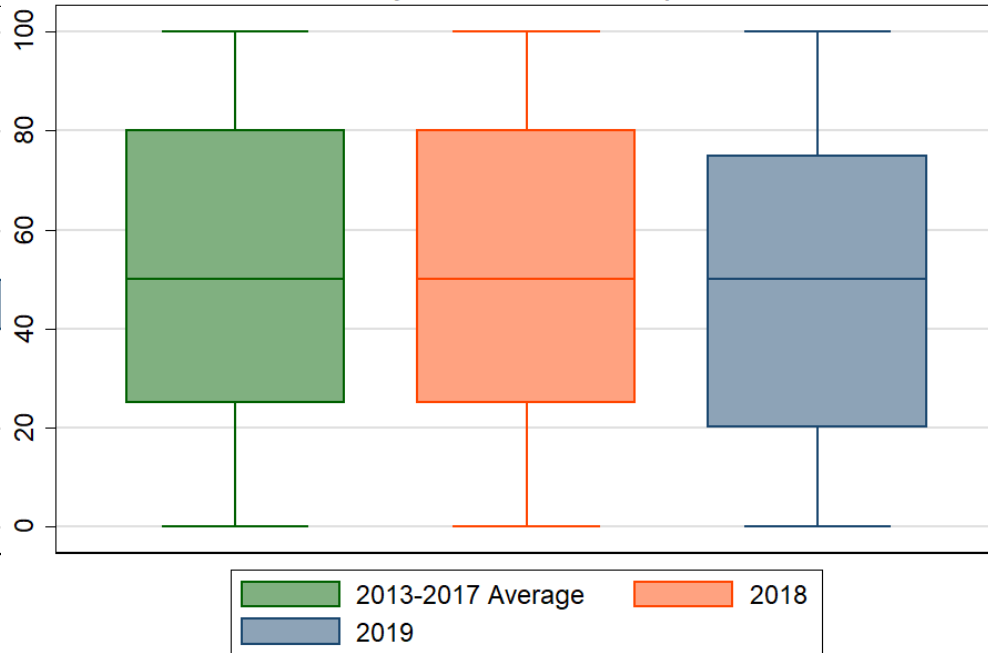**41% somewhat helpful, 18% quite helpful, 25% very helpful**

Percent of soybeans marketed before harvest

Percent of acres planted for soybeans

Percent of soybeans sold via spot cash sale

Virtually no change in marketing & planting decisions

Legend: 2013-2017 Average, 2018, 2019

Perceived impacts on US Agriculture & "My Farm"

	Agree	Strongly agree
1.Nothing good will come out of this trade disruption.	**17**	**13**
2. I hope this trade disruption is resolved soon.	**34**	**47**
3. The trade disruption will make US agriculture lose markets to our competitors.	27	23
4. The US economy will suffer more than China's economy due to this trade disruption.	32	20
5. American farmers will bear the brunt of the tariffs imposed by the Chinese government.	29	22
6. A year from now, my farm operation will be better off financially because of this trade disruption.	14	3
7. A year from now, US agriculture will be better off compared to now because of this trade disruption.	26	5
8. Three years from now, the US economy in general will be better off because of the trade disruption.	29	14
9. The tariffs imposed by the US and China on each other's products will have long-term negative effects on US agriculture.	32	14
10. This trade disruption will enhance the economic relationship between the US and China in the long run.	29	5

Farmers' Views about US-China Trade & Economy Issues

	Agree	Strongly agree
1.The amount of US debt held by China is a serious problem for the US.	53	25
2. The trade deficit with China is harmful to the US economy.	54	18
3. China engages in cyber economic espionage against the US.	43	27
4. The number of jobs Americans lose to China is problematic.	49	15
5. Economically, China is an ally of the US.	28	3
6. It is important for the US to maintain a healthy economic relationship with China.	67	25
7. The US will be better off using a multilateral approach, rather than a unilateral one, in dealing with trade disputes.	36	14
8. The US is better off leaving the TPP (Trans-Pacific Partnership).	16	3
China's intellectual property protection record is poor	45	31

Thank You!

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(Currently hiring a two-year postdoc)
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China Needs International Market: Ag is comparative advantage for US, not for China

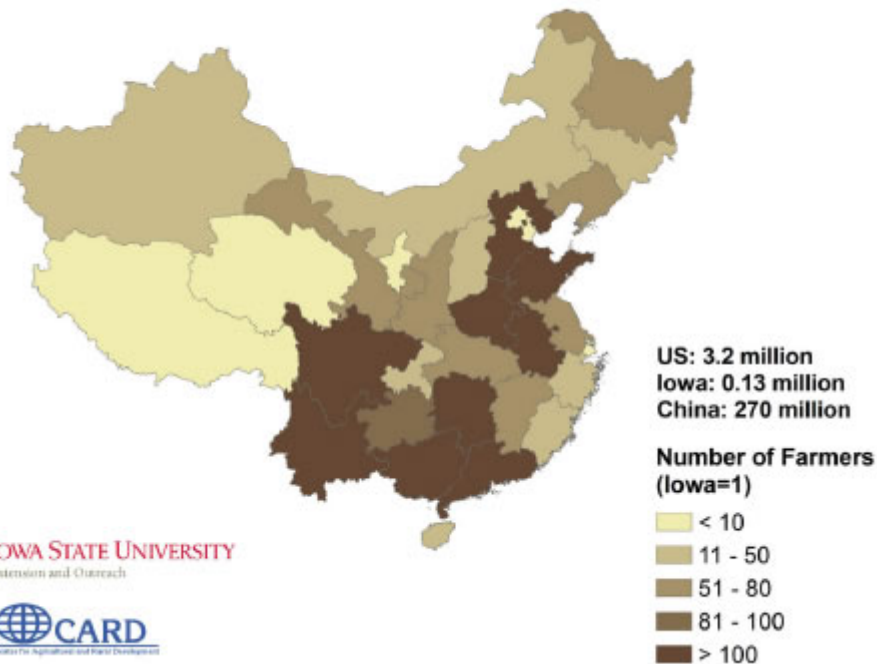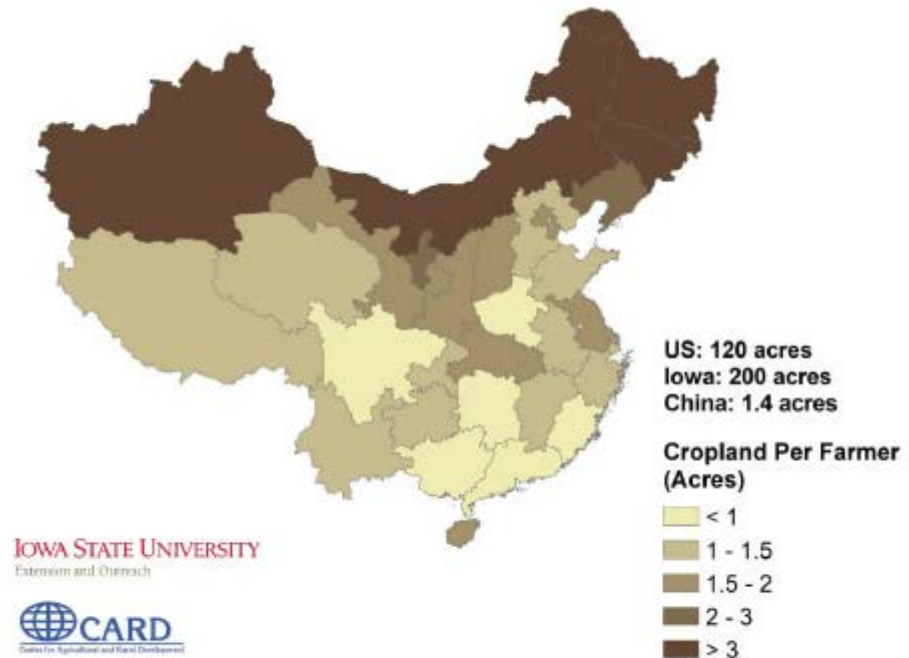Figure 1. Number of farmers in Chinese provinces compared to Iowa

US: 3.2 million
Iowa: 0.13 million
China: 270 million

Number of Farmers (Iowa=1)
- < 10
- 11 - 50
- 51 - 80
- 81 - 100
- > 100

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Figure 2. Crop land per farmer in China in acres

US: 120 acres
Iowa: 200 acres
China: 1.4 acres

Cropland Per Farmer (Acres)
- < 1
- 1 - 1.5
- 1.5 - 2
- 2 - 3
- > 3

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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.
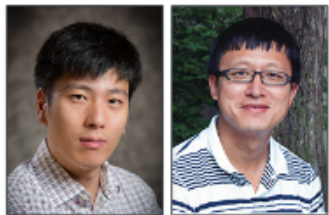
Navigating the Chinese agricultural economy through the lens of Iowa

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

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

Minghao Li, Wendong Zhang, and Chad Hart

Proportional, Restrained Response

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

Target Products That Are Substitutable

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

Inflict Economic and Political Costs

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