

U.S. Ag Trade: Existing vs Emerging Markets

Ohio Grain Symposium

Ben Brown

December 18, 2018

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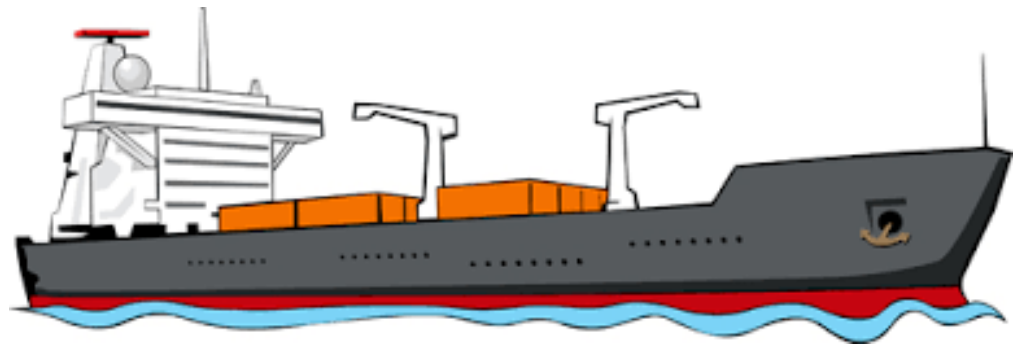


THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES

Today's Outline- Trade Policy

- Understanding the U.S. Trade Deficit
- Ohio Ag Trade
- World Soybean Impacts from Trade Disruptions
- (USMCA) New NAFTA
- Summary



What is the U.S. Desired Result- What is our better deal?

- ✓ Is this a matter of national security?
 - ✓ What is the critical level of steel and aluminum production in the U.S.?
- ✓ Is it about the trade deficit?
 - ✓ We have a total trade deficit, but agriculture has a trade surplus.
 - ✓ If so is it about increasing U.S. exports or decreasing U.S. imports?
- ✓ Is it about China's monetary policy of currency manipulation?
- ✓ Is it about securing intellectual property?

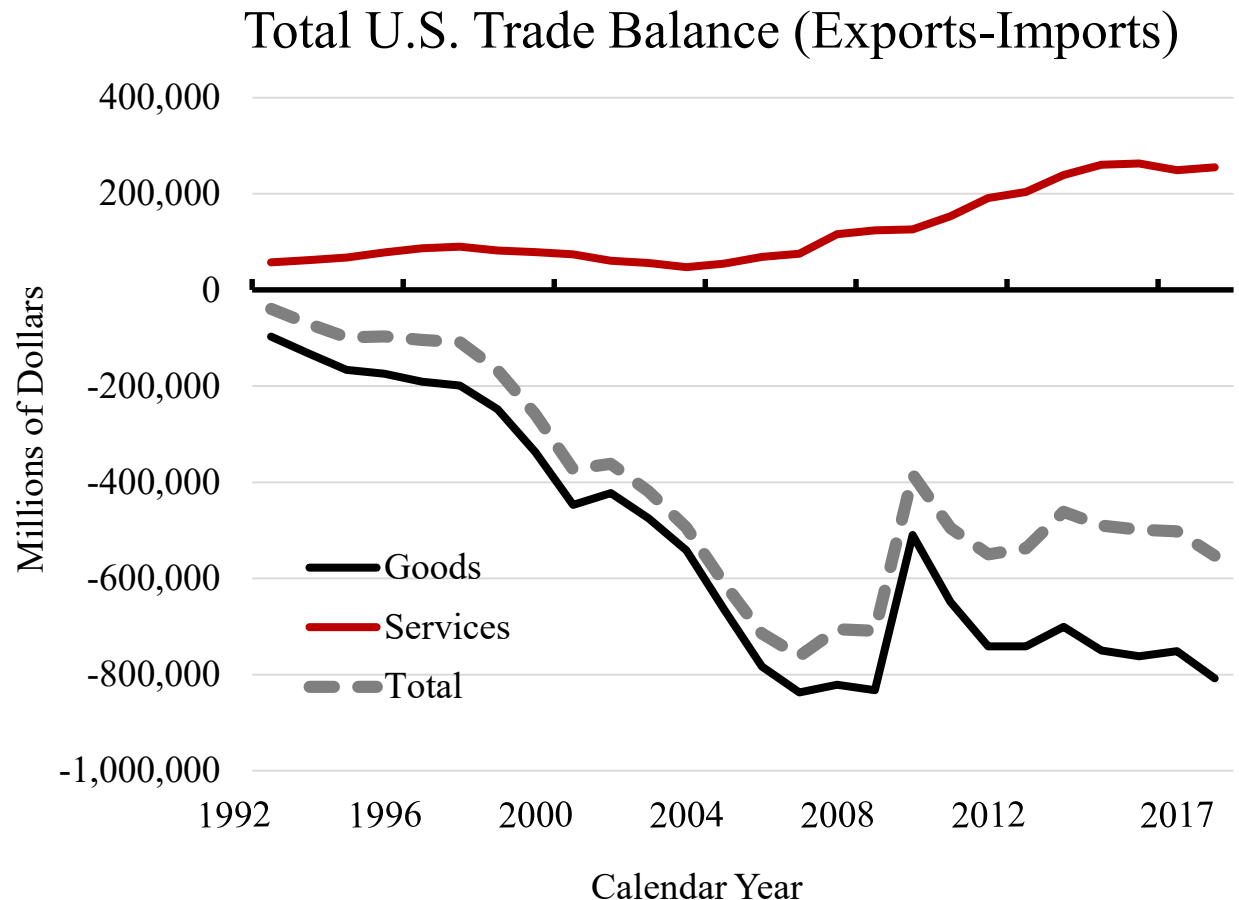
U.S. Trade Deficit- Why is there a Deficit?

Goods Contribute 2/3 of U.S. Trade Balance:

Automobiles, fuel,
plastic, & medicine

Services Contribute 1/3 of U.S. Trade Balance:

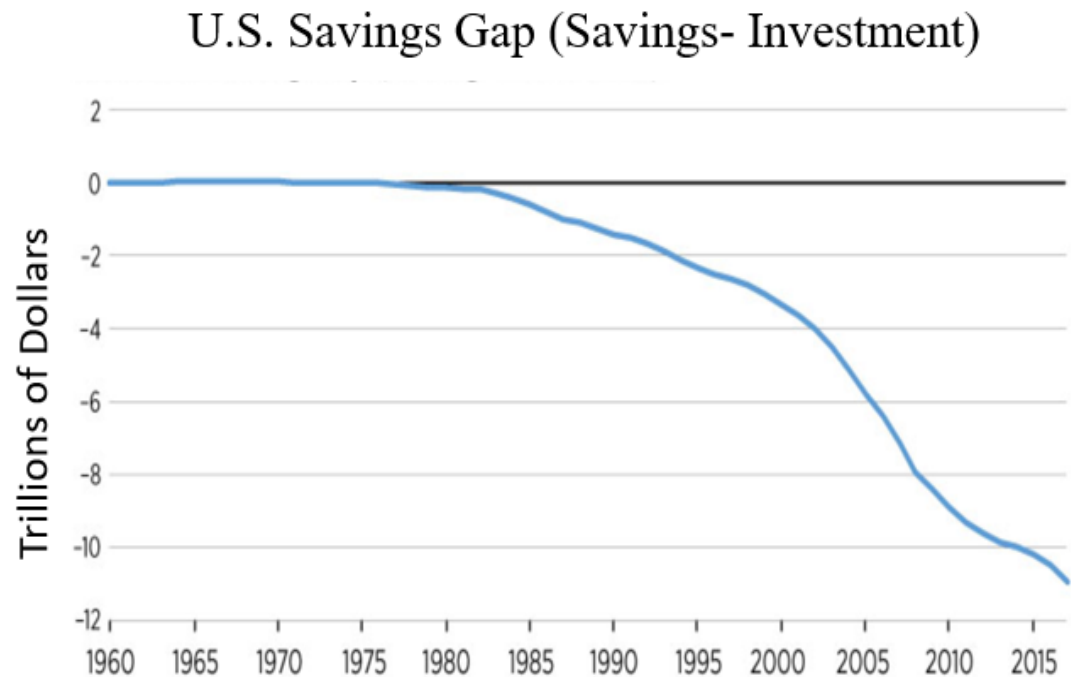
Travel Services,
License Fees, &
Insurance and
Financial Services



U.S. Trade- Cumulative Saving Gap

$$(\text{Exports}-\text{Imports}) = ((\text{National Savings} + \text{Private Savings}) - \text{Investment})$$

- ✓ U.S. Trade deficit is driven by decline in saving rate.
- ✓ U.S. Households have high tendency to consume.
- ✓ Trade deficit will continue unless savings increase or investment falls.
- ✓ Any increase in fiscal deficit will feed into trade deficit.



Source: Bureau of Economic Analysis

Comparative Advantage: **Is Shifting**

Industrialization Happens in 3 Phases

- 1) Features labor-intensive mass production outside of agriculture
Textiles, consumer products, food
- 2) Features capital-intensive mass production
Automobile, oil refining, steel production, airlines
- 3) Features a service-oriented welfare state
Dominated by health and finance sectors

← U.S. is here

Phase 1

Phase 2

Phase 3

Labor costs rise to the point that capital-intensive technology is cheaper.

Rising labor productivity and continually improving technologies

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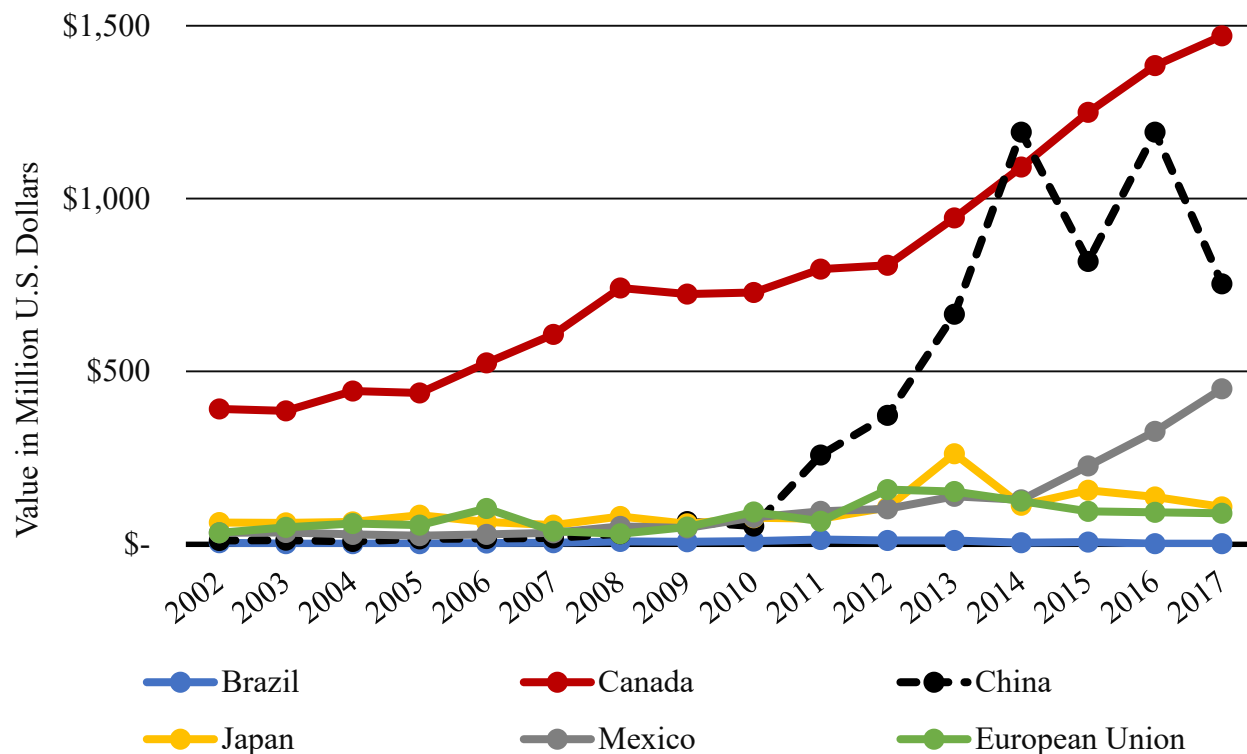
Trade Negotiations: **China**



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Total Agricultural Trade- Ohio

Ohio Agricultural Exports by Destination Country

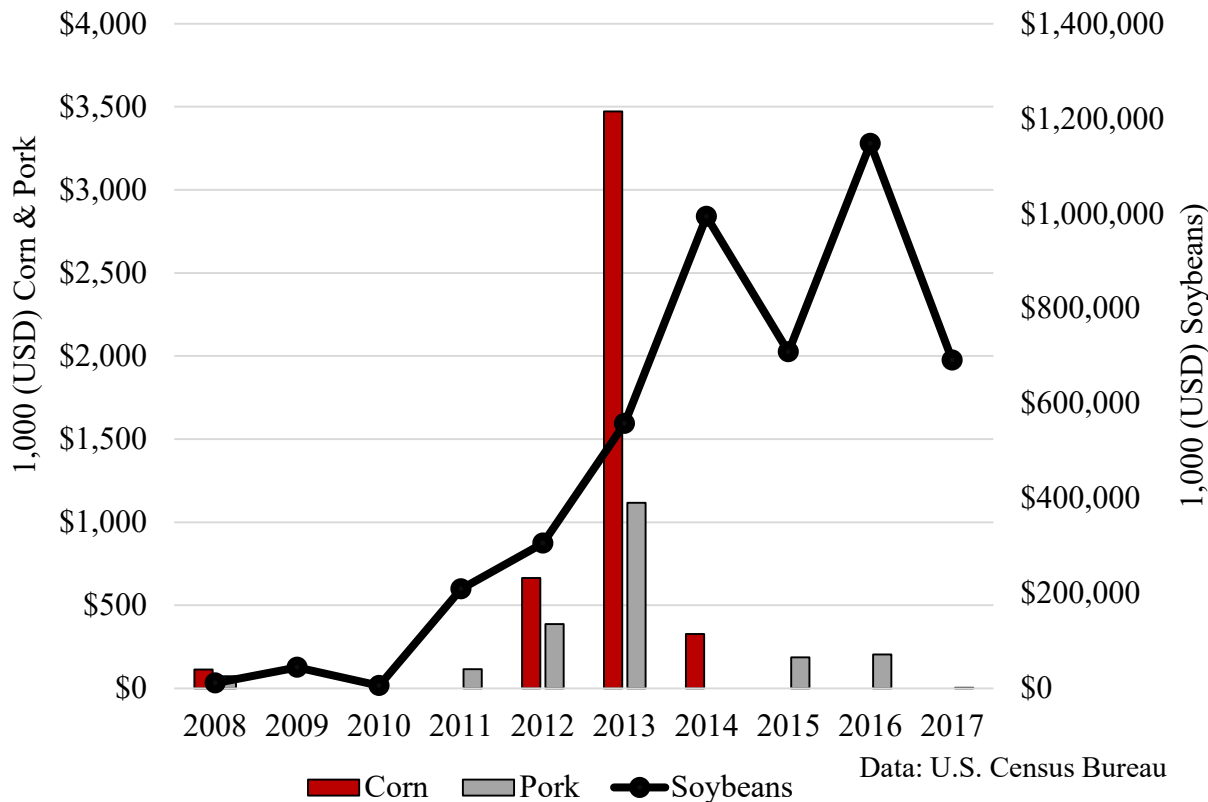


Data: U.S. Census Bureau

- ✓ Canada Remains our largest consumer
- ✓ China becomes our second largest
- ✓ NAFTA makes up 49% of Ohio's agricultural trade

Ohio Agricultural Trade- **Just China**

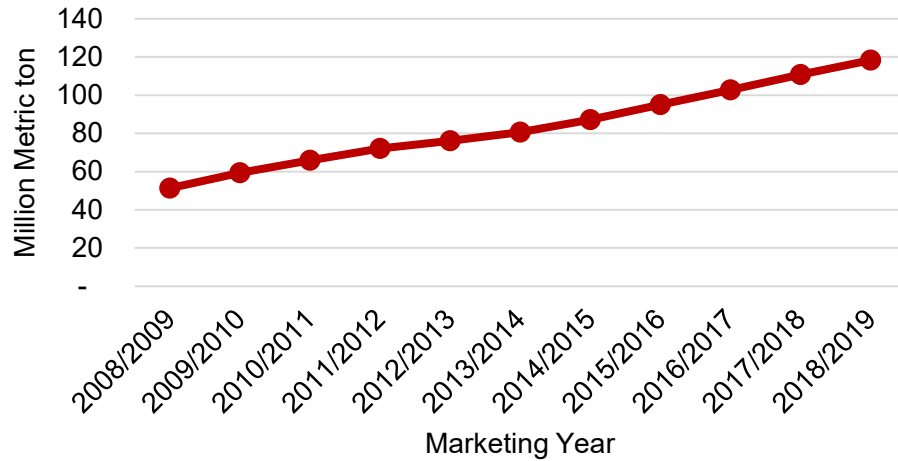
Ohio Agricultural Exports to China



- ✓ Soybeans are the predominant agricultural export to China
- ✓ High corn processing and trade with Mexico limit quantity available for trade to China
- ✓ Mexico also consumes most of our pork

Chinese Soybean Consumption and Imports

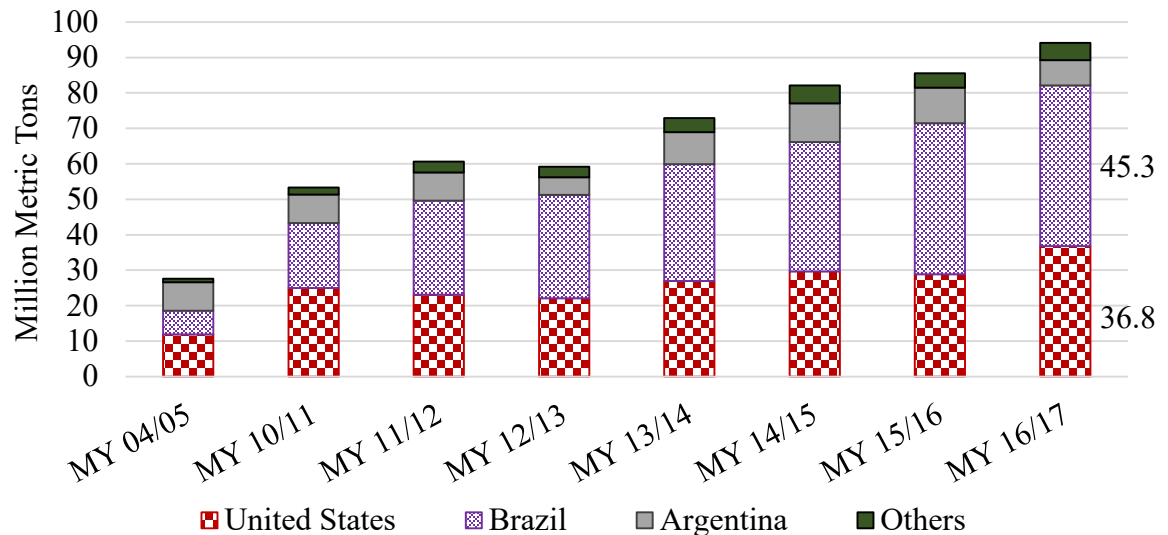
Chinese Consumption of Soybeans



- ✓ Chinese Consumption of Soybeans continues to increase
 - ✓ Mostly for feedstock to pork production
 - ✓ Some for soybean oil

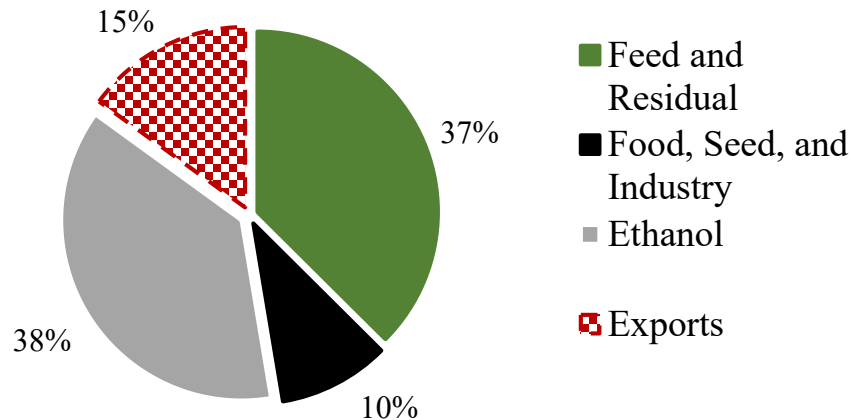
- ✓ Since 2012, Brazil has been the largest supplier of soybeans to China
 - ✓ Partially due to the drought of 2012

Chinese Soybean Imports



U.S. Corn and Soybean Use- % of Trade

Percentages of U.S. Corn Use



Data: World Outlook Board

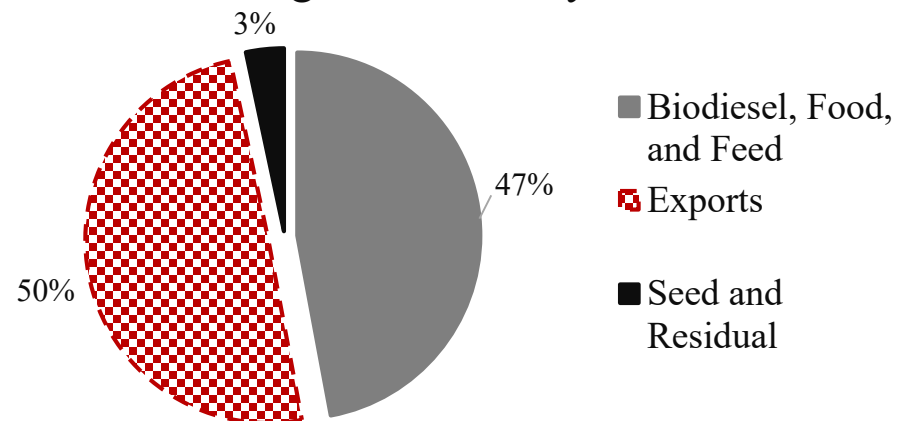
Top Five Markets for U.S. Corn

1. Mexico
2. Japan
3. Colombia
4. South Korea
5. Peru

Top Five Markets for U.S. Soybeans

1. China
2. Mexico
3. Japan
4. Indonesia
5. Netherlands

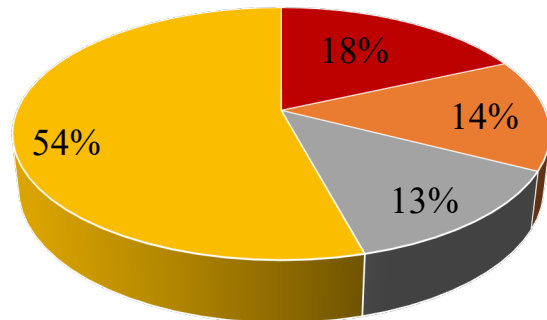
Percentages of U.S. Soybean Use



Data: World Outlook Board

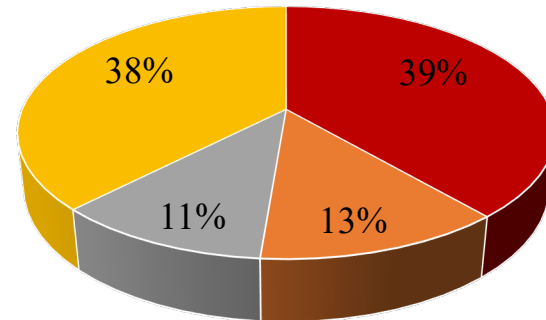
How dependent is the U.S.?: Soybeans

U.S. Soybean Export Portfolio:
Average Annual Percentages 1998-2002



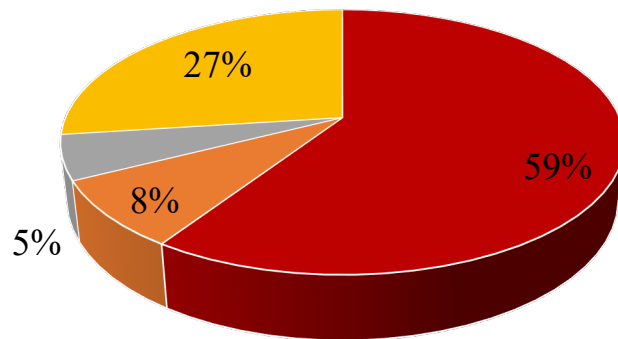
■ China ■ Mexico ■ Japan ■ ROW

U.S. Soybean Export Portfolio:
Average Annual Percentages 2003-2007



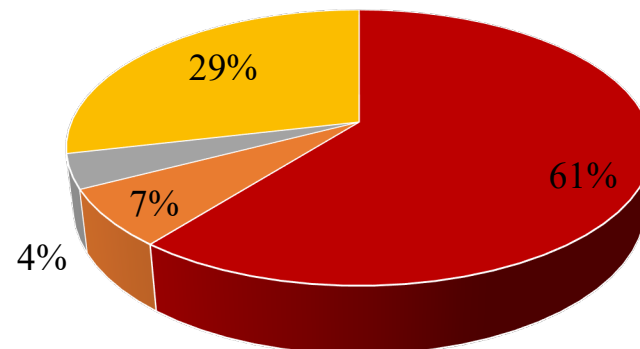
■ China ■ Mexico ■ Japan ■ ROW

U.S. Soybean Export Portfolio:
Average Annual Percentages 2008-2012



■ China ■ Mexico ■ Japan ■ ROW

U.S. Soybean Export Portfolio:
Average Annual Percentages 2013-2017

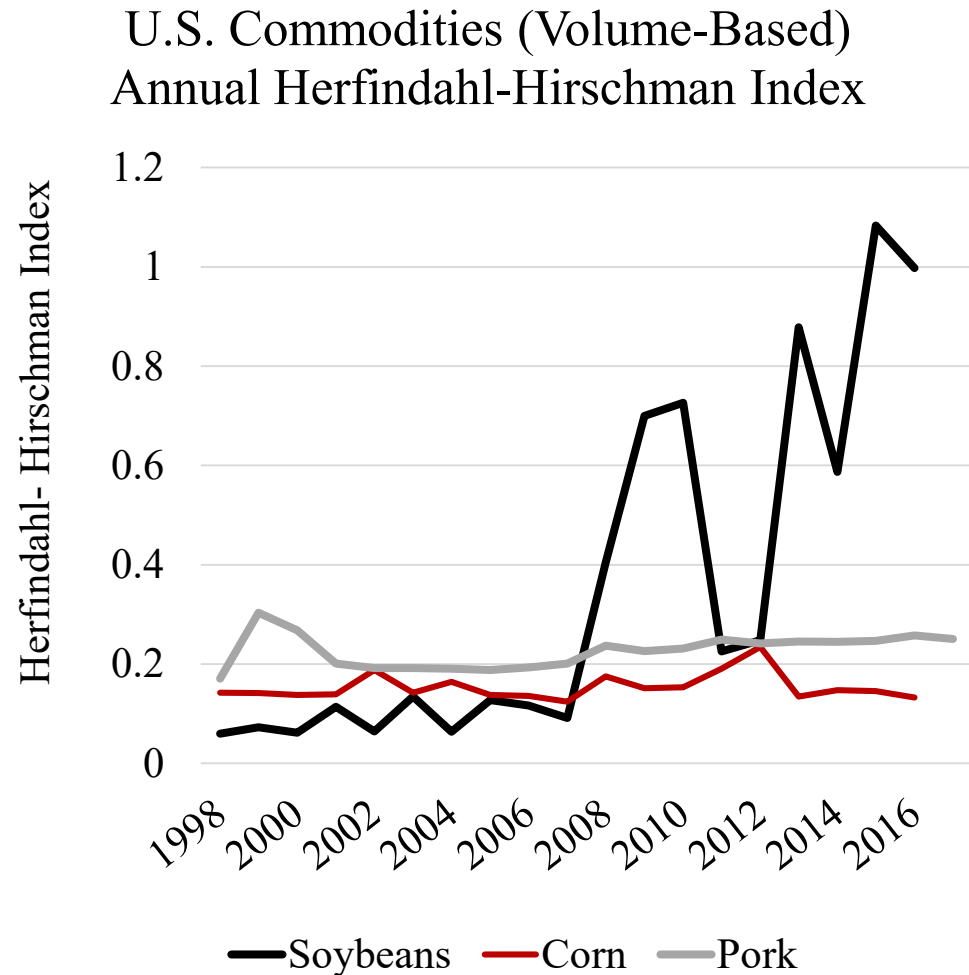


■ China ■ Mexico ■ Japan ■ ROW

Data Source: Author calculation using USDA-FAS data

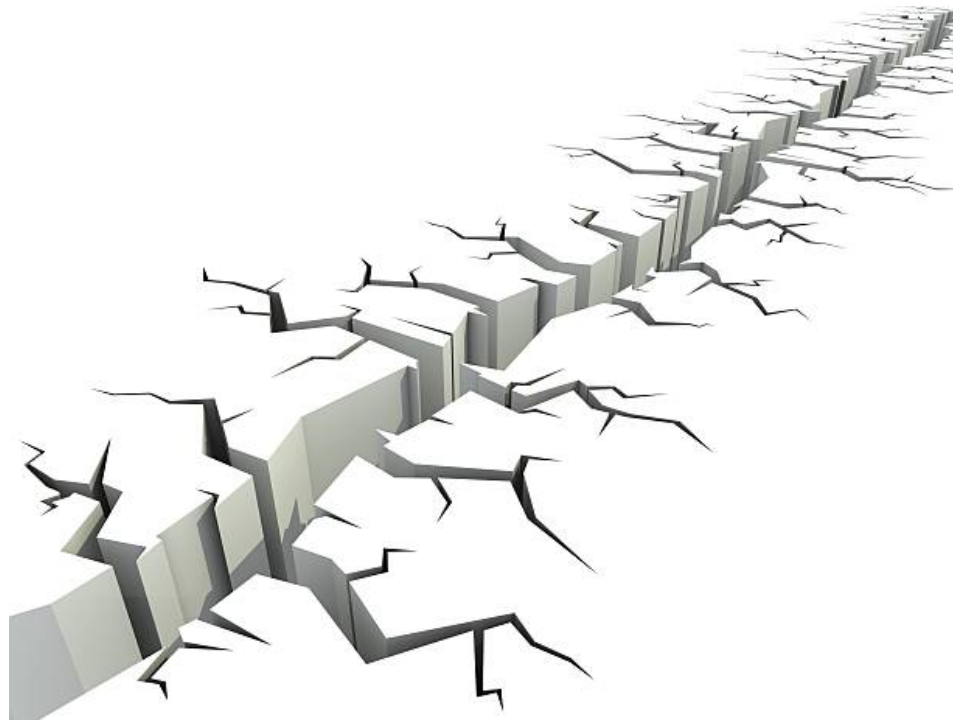
How Dependent is the U.S.?: Soybeans

- ✓ The U.S. soybean market has become more demand concentrated than corn and pork.
- ✓ Did market concentration expose the U.S. soybean industry?
- ✓ We can assume that the trade war will diversify U.S. soybean exports.
 - ✓ Some will argue for government regulation to prevent disruption again in the future.



Data: USDA- FSA; Calculated by Author

U.S. Impacts from Trade Disruptions



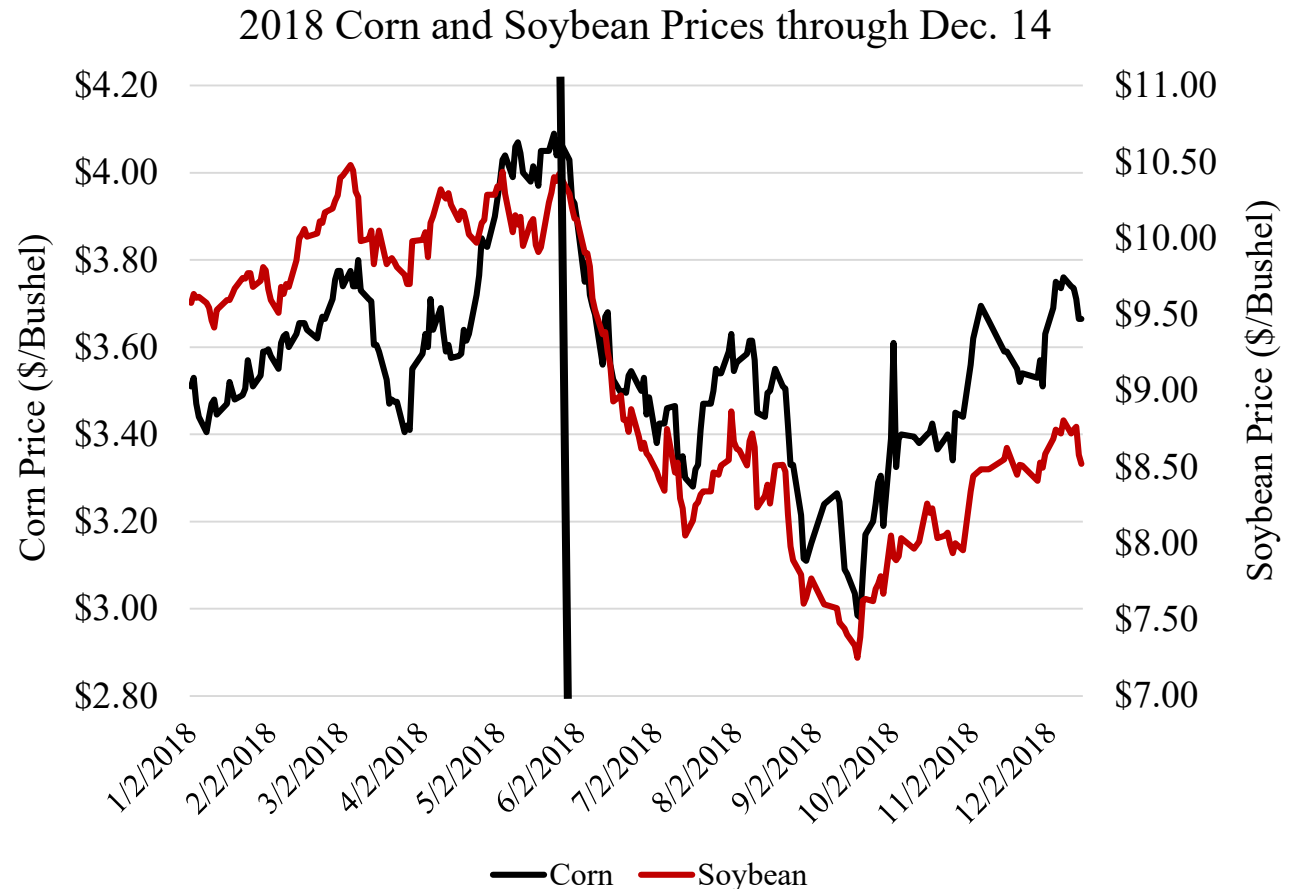
2018: A Tale of Two Halves

January-May

- ✓ \$4.00 corn and \$10.50 soybean cash prices
- ✓ Strong world economic growth
- ✓ Shrinking world stocks

June-October

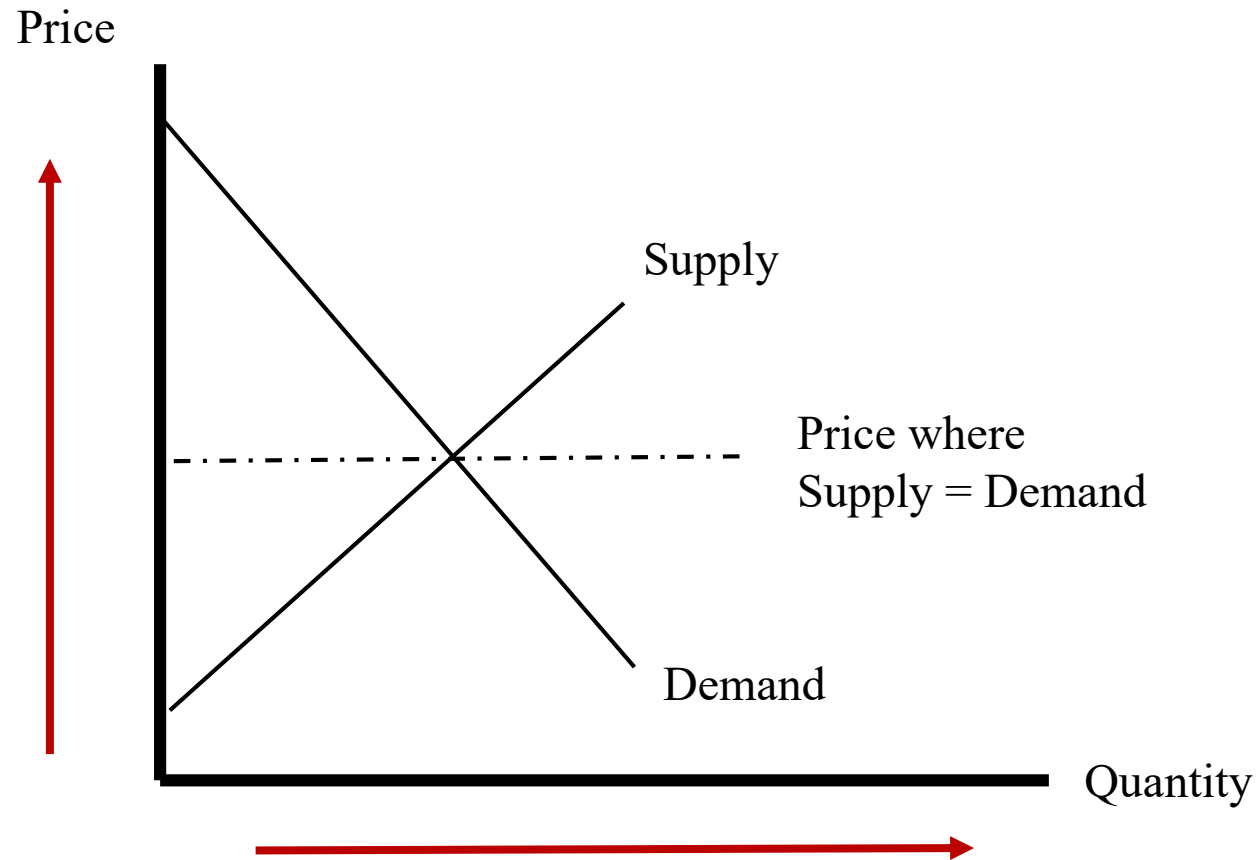
- ✓ Escalating trade tensions
- ✓ Large Supplies



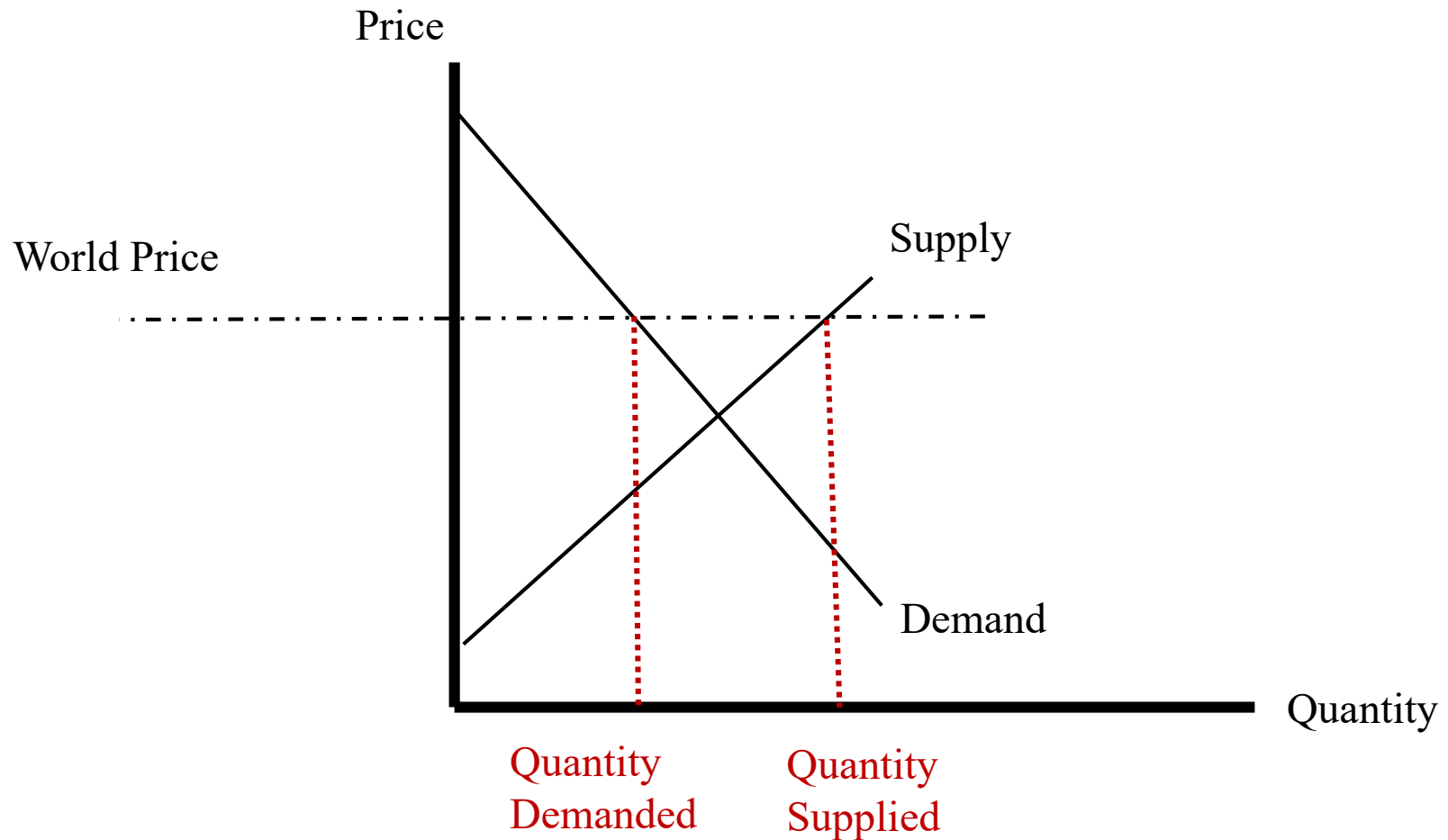
Most Common Questions- Up till now

- The U.S. can sell more soybeans to other buyers, right?
 - Example: would be the European Union
- Even with the 25% tariffs, China still has to buy soybeans from the U.S., right?
- Will China buy soybeans and then cancel them before shipment?
- President Trump is working to increase soybean export sales to China, right?
- Implications: We can store our way out of the problem, right?
- Will the big yield counteract the drop in price?

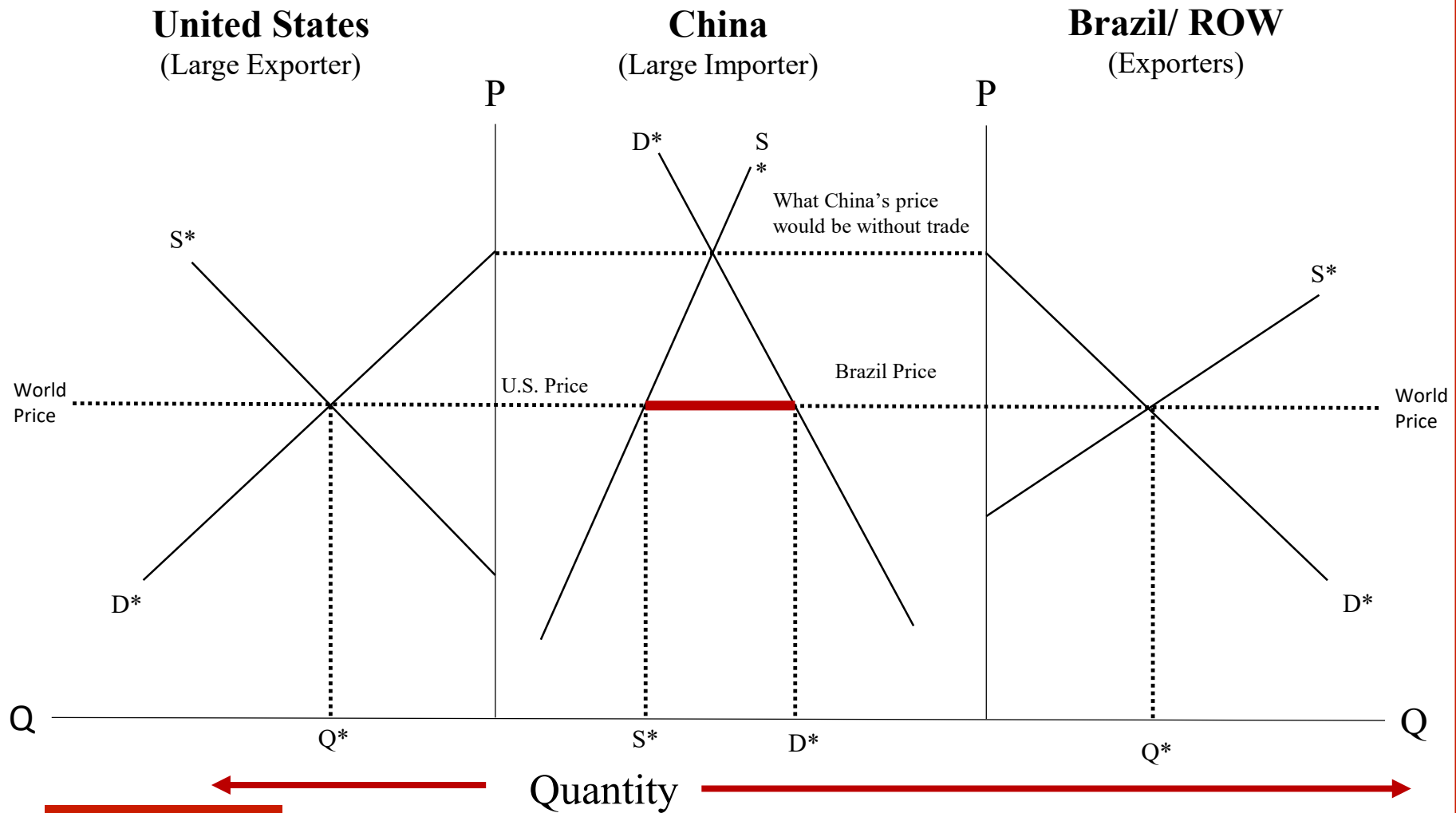
Understanding Supply and Demand



What can we tell about this country from this graph?



Initial Trade Diagram



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Black= Free Trade

Can World Soybeans just be Reallocated?

- ✓ China accounts for 63% of world soybean trade
- ✓ Mathematically if China sources all their soybeans from Non-U.S. suppliers and U.S. backfills, there would be little world trade change.
- ✓ In the short-run this is almost impossible and local prices in Brazil, China and U.S. will adjust.

2017/18 Trade (Million Metric Tons)

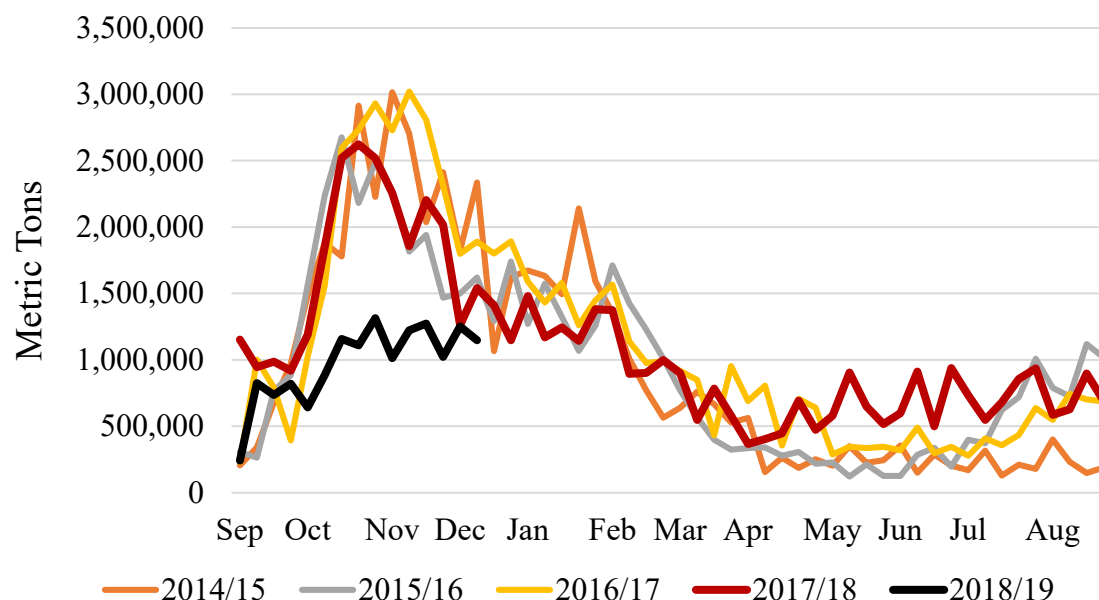
China's Soybean Imports	96
All Other Countries Imports	57
U.S. Soybean Exports	57
Non-U.S. Soybean Exports	95
Brazil Exports	75
Other Soy Exporters	20

Data Source: WASDE Dec. Update

Total Soy Exports: Lagging in 2018/19

- ✓ Cheap soybeans encouraged exports in end of 2017/18.
- ✓ Exports have been extremely weak to start 2018/19.
 - ✓ 54% behind average pace and forward sales are 16% below last year.
- ✓ 1st Quarter historically represents 42% of total sales.
- ✓ Simply the smaller markets are **NOT** making up the loss from China.
- ✓ Brazil's new crop will soon be on the market.

Total U.S. Soybean Exports (Weekly)



Status of Emerging and Existing Markets

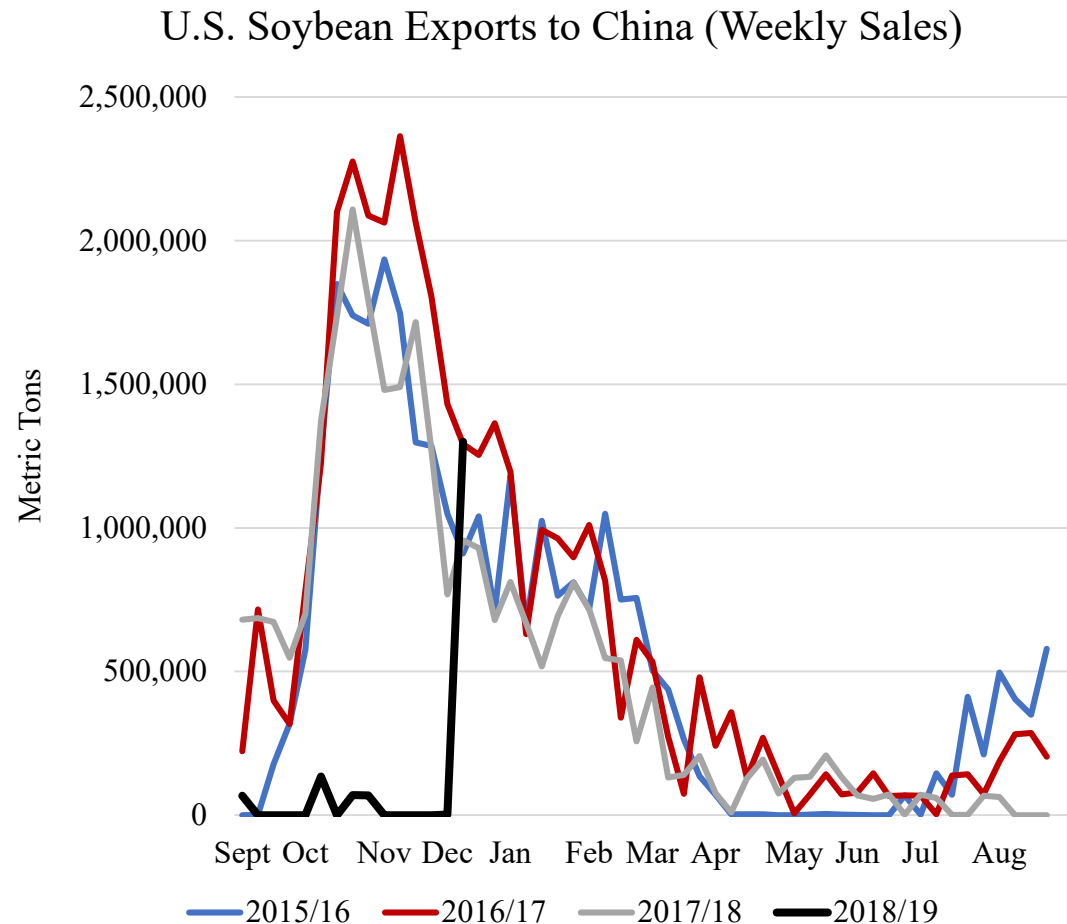
Country	% Change	Absolute Change Metric Ton
EU-27	210%	1,094,487
Egypt	1,968%	411,176
Iran	733%	294,417
Netherlands	106%	203,681

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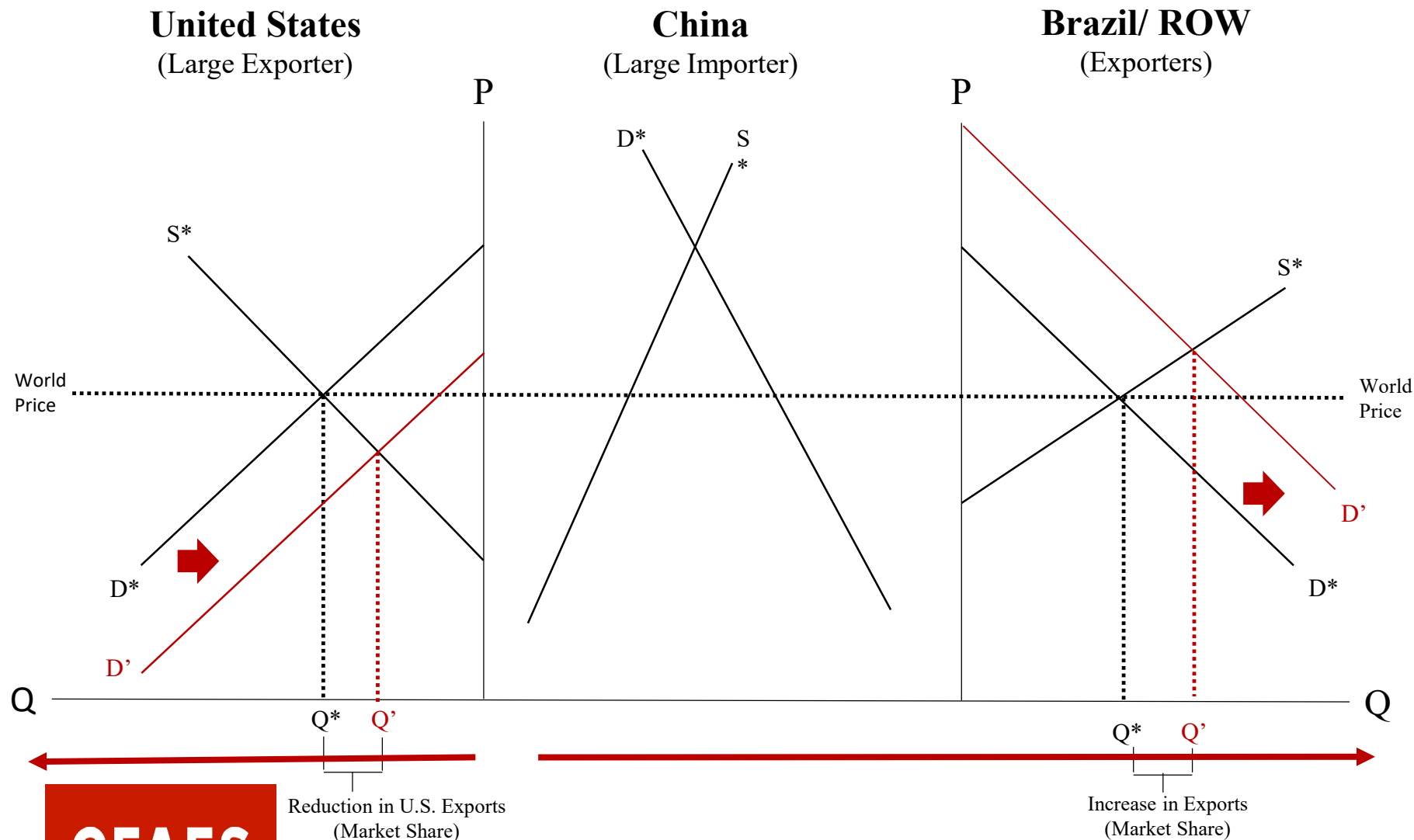
Data Source: USDA-FAS

U.S. Soybeans: Exports to China “Not” There

- ✓ U.S. Sales to China are currently 600 million bushels below a year ago.
- ✓ The China National Grain and Oilseed Center has China soybean imports projected another 300 million bushels below current USDA projections at 3.45 bi. Bu. (10% reduction)



This will not lead to a 1 for 1 substitution

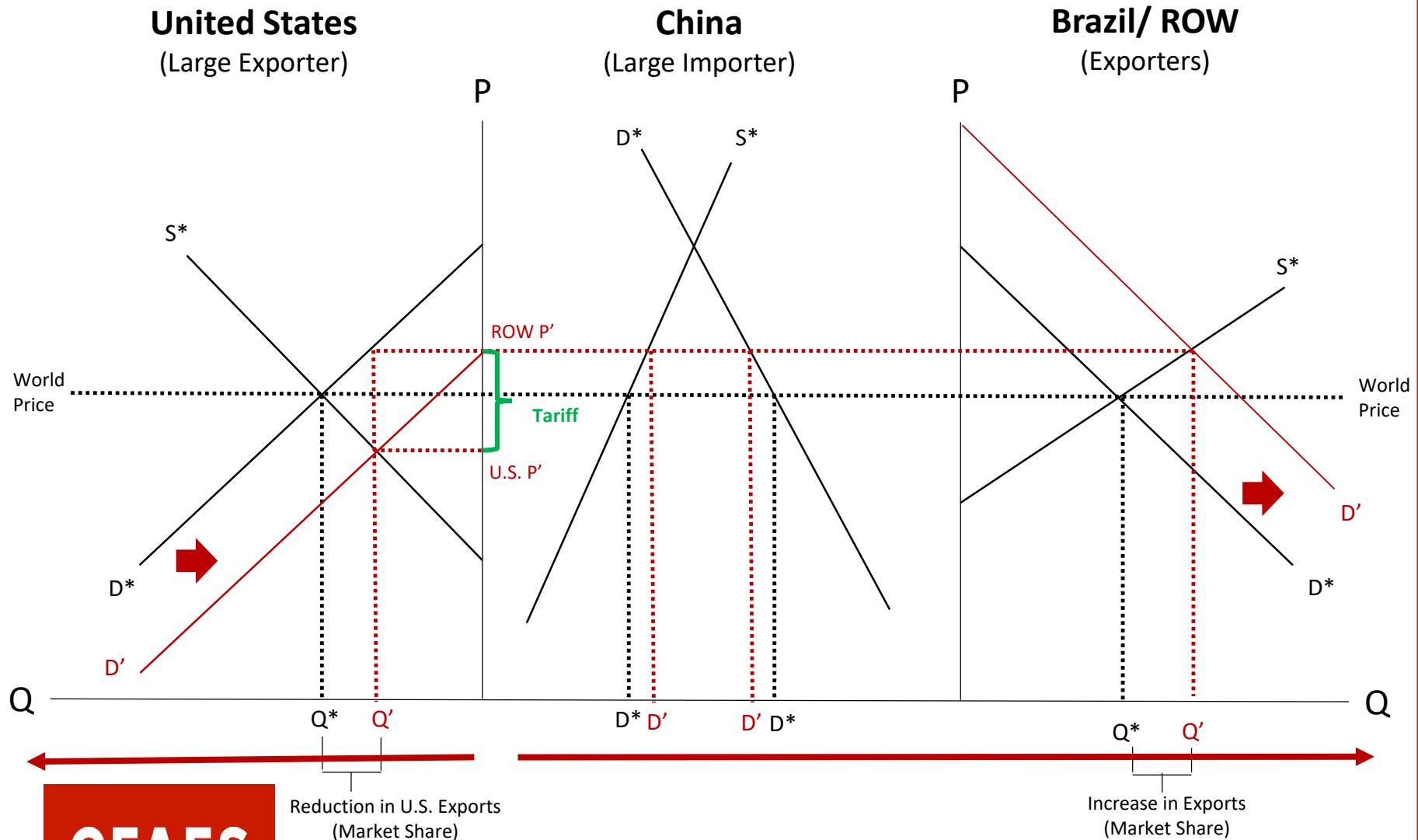


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Black= Free Trade

Red= Discriminatory Tariff

U.S. + Tariff = Brazilian Price



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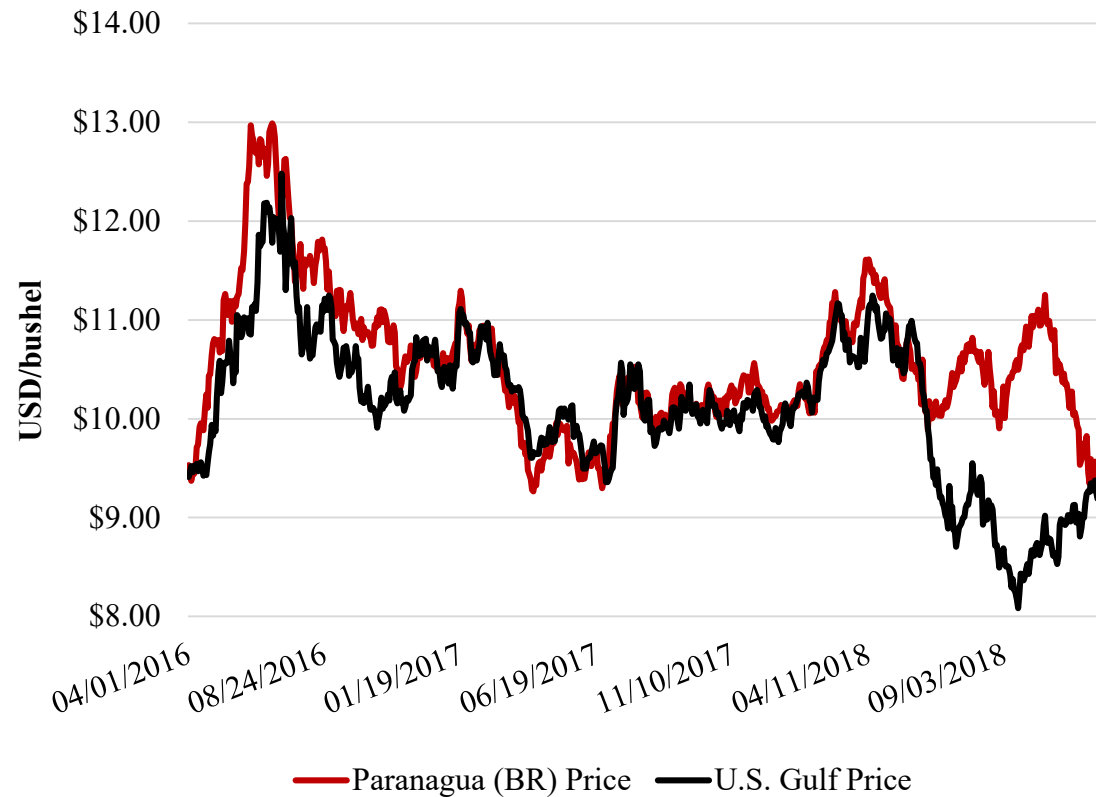
Black= Free Trade

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Soybean Price: Difference in U.S & Brazil

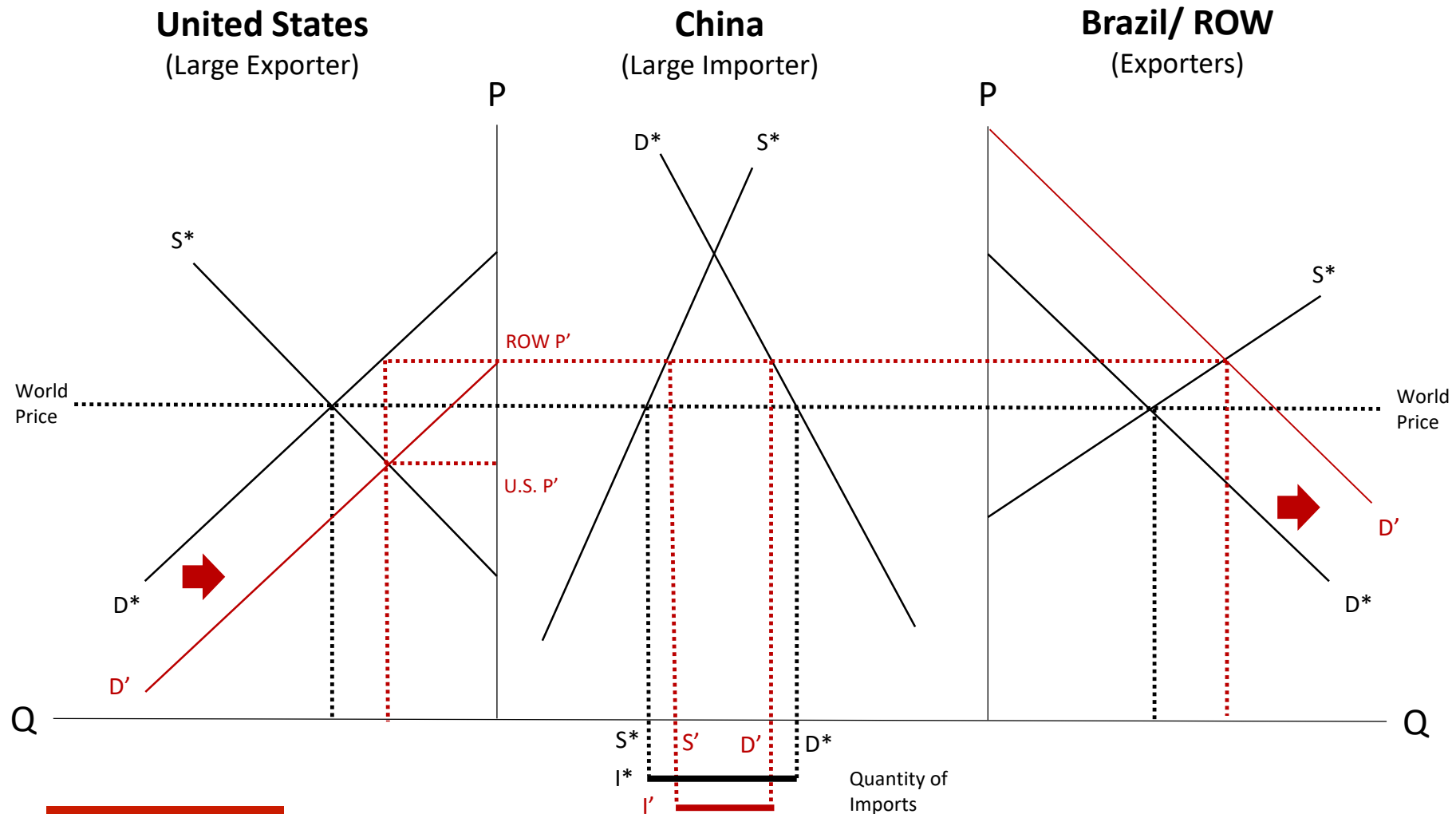
- ✓ Brazil and U.S. soybean prices have historically tracked each other with occasional difference.
- ✓ There is a noticeable break starting in June between the two prices.
- ✓ Brazil producers got the signal to expand production.

Soybean Export Spot Prices- Dec. 14



Data Source: USDA-AMS and Cepea (BR)

This will not lead to a 1 for 1 substitution



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Black= Free Trade

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China Consumption Behavior: **Changing**

China's new animal feed standards set to lower soybean consumption, ministry says -From South China Morning Post

China rolls out subsidies to boost domestic soybean production

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-From CGTN

- ✓ While the production and import changes from 2017 are small, what is the potential in future years?
- ✓ Will China continue to change their production policies?
 - ✓ Away from subsidies for corn and wheat to soybean production.

Chinese Soybean Behavior (Million Metric Tons)

	2017/18	2018/19	% Δ
Production	14.2	16	13%
Imports	96.0	90.0	-6%
Ending Stocks	23.5	19.84	-16%

Data Source: WASDE Dec. Update

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Soybean Crush: **Shifts by Country**

1,000 Metric Tons	2014/15	2015/16	2016/17	2017/18	2018/19 Jun	2018/19 Oct
China	74,500	81,500	88,000	90,000	102,000	92,500
United States	50,975	51,335	51,742	55,926	54,431	56,608
Argentina	40,235	43,267	43,303	37,500	44,000	43,000
Brazil	40,435	39,747	40,411	43,600	43,200	42,700
European Union	14,450	14,950	14,400	15,000	14,900	16,600
India	7,700	5,500	9,000	7,600	9,100	9,400
ROW	36,515	38,725	40,490	44,513	45,842	47,381
Total	264,810	275,024	287,346	294,139	313,473	308,189

- ✓ International and Domestic Prices in relation to soybean meal and soybean oil influence quantity of soybean crush

Substitution: Other Protein Sources for China

China Oilseeds Supply Distribution (Million Metric Tons)

Domestic Use	2014/15	2015/16	2016/17	2017/18	2018/19 Jun	2018/19
Palm Oil	5.7	4.8	4.8	5.1	4.9	5.6
Peanut Oil	2.8	2.9	3.0	3.1	3.2	2.9
Rapeseed Oil	4.0	4.1	4.1	4.3	4.6	5.1
Soybean Oil	14.2	15.4	16.4	16.9	18.5	17.4
Sunflower Oil	1.0	1.4	1.3	1.4	1.6	1.6
Other	2.1	1.8	1.9	2.1	2.1	2.2
Total	29.8	30.4	31.5	32.8	34.8	34.8

Long Term Changes?

- ✓ Changes in Chinese Consumption and Production
- ✓ Changes in South America Production and Trade
- ✓ Dependence on International Markets of U.S. Product
- ✓ U.S. Market Share in the Chinese Market

Soybean Supply Change: **From Chinese Tariff**

Table 1. Changes in Bilateral Trade of Soybeans Due to 25% Chinese Tariff on U.S. Soybeans (%)

		Importers			
		European Union	China	Rest of the World	Global
Case 1: Standard GTAP trade elasticities	Exporters				
	United States	13.2	-47.7	15.3	-24.1
	Brazil	-16.9	18	-13.1	14.7
	Rest of South America	-14	22.4	-9.9	15.8
	Global	7.5	-5.3	4.7	-2.5
Case 2: Elevated trade elasticities for soybeans	Exporters	European Union	China	Rest of the World	Global
	United States	38.6	-90.6	64.1	-34.2
	Brazil	-80	36.1	-73.3	24.8
	Rest of South America	-76.6	62.3	-64.2	36.6
	Global	15.3	-5.3	13.4	-0.2

Source: GTAP- Purdue University

Price Changes

Soybeans Decrease of 3.8% and 4.9%

Corn Decrease of 1.1% and 1.6%

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U.S. Corn Demand: **Exports Finish Strong**

		2015/16	2016/17	2017/18	2018/19	Δ 2017/18
Area Planted	(Mil. Acres)	88.0	94.0	90.2	89.1	-1%
Yield	(Bu./acre)	168.4	174.6	176.6	178.9	1%
Production	(Mil. Bu.)	13,602	15,148	14,604	14,626	0.2%
Beg. Stocks	(Mil. Bu.)	1,731	1,737	2,293	2,140	-7%
Imports	(Mil. Bu.)	67	57	36	45	25%
Total Supply	(Mil. Bu.)	15,401	16,942	16,934	16,811	-0.7%
Feed & Residual	(Mil. Bu.)	5,120	5,470	5,302	5,500	4%
Food, Seed, & Other	(Mil. Bu.)	1,422	1,453	1,453	1,480	1%
Ethanol	(Mil. Bu.)	5,224	5,432	5,601	5,600	0%
Exports	(Mil. Bu.)	1,898	2,294	2,438	2,450	0.4%
Total Use	(Mil. Bu.)	13,664	14,649	14,793	15,030	2%
Ending Stocks	(Mil. Bu.)	1,737	2,293	2,140	1,781	-17%
Season Av Price	(\$/bu.)	\$3.61	\$3.36	\$3.36	\$3.60	+ \$0.24

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Roughly same Production and Lower Beg. Stocks
Slightly lower Total Supply as 2017/18

Source: USDA-WAOB

U.S. Corn Use: **Low Price Spurs Exports**

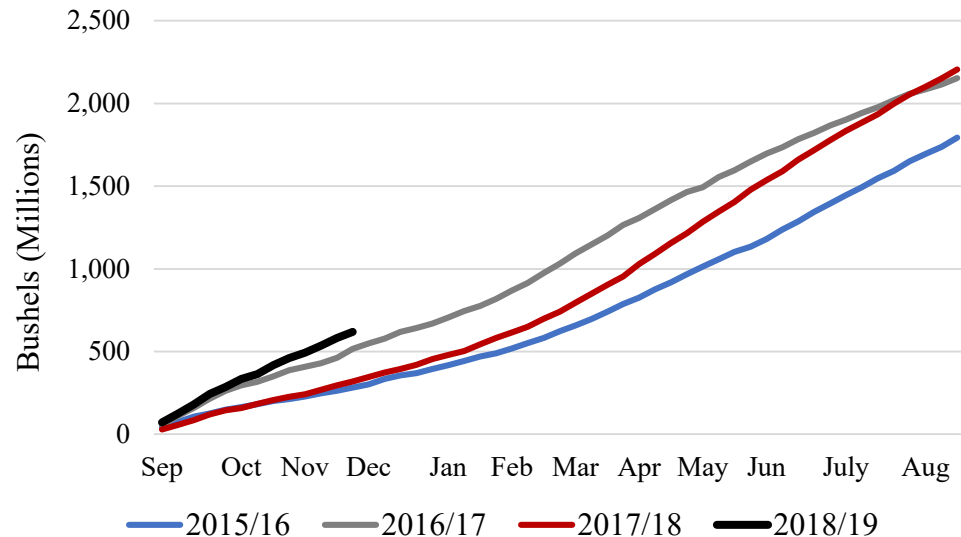
- ✓ Strong corn sales through the first 2 months of the marketing year.
- ✓ 2018/19 corn sales came in 38% higher last week than a year ago.
- ✓ Export inspections sit 94% above a year ago.
- ✓ Large supply and relatively low prices suggest strength in exports.

Data: USDA-FAS

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755,000

Accumulative U.S. Corn Exports



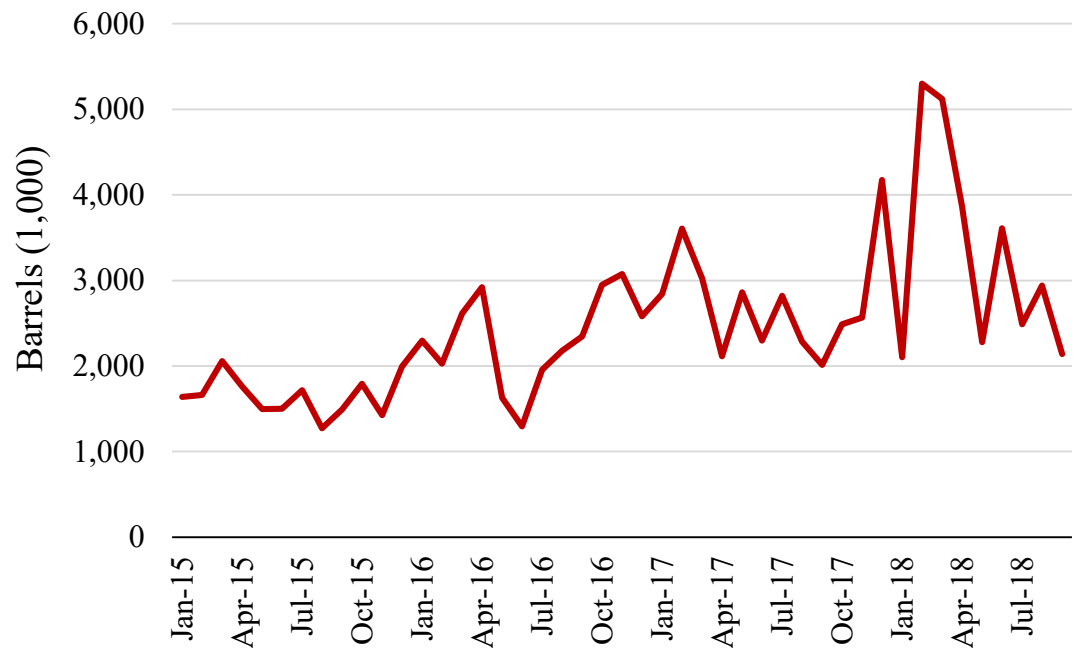
Status of Emerging and Existing Markets

Country	Percent Change	Absolute Change
		Million Bushels
Vietnam	632%	63
Mexico	11%	56
EU-27	114%	40
Israel	847%	23
Columbia	12%	21
Japan	-6%	-29

U.S. Corn Use: **Ethanol Exports**

- ✓ Ethanol Exports were record strong in 2017/18 at almost 1.62 billion gallons.
- ✓ U.S. Ethanol Exports to Brazil accounted for 34% of total 2017/18 exports.
- ✓ Brazil's Ethanol stocks are up 29% over last year.
 - ✓ Sugar refineries
- ✓ 2018/2019 corn use for ethanol numbers are more likely to be similar to 2017/18 at 5.6 bil. Bu., but could go lower on lower exports.

U.S. Exports of Fuel Ethanol-Through September



Top U.S Ethanol Markets

Brazil	33%
Canada	24%
India	13%
Philippines	5%

The United States, Mexico, and Canada Agreement

USMCA- Rolls right off the tongue doesn't it? You might here me
call it New NAFTA or NAFTA 2.0

New NAFTA- It happened “Quick”

2017

- ✓ January 23- President Trump sign executive order to withdraw
- ✓ April 28- The U.S. will renegotiate, not exit, NAFTA
- ✓ May 17- Industry Association's “Do NO Harm”
- ✓ August 16- First of 9 rounds of negotiations

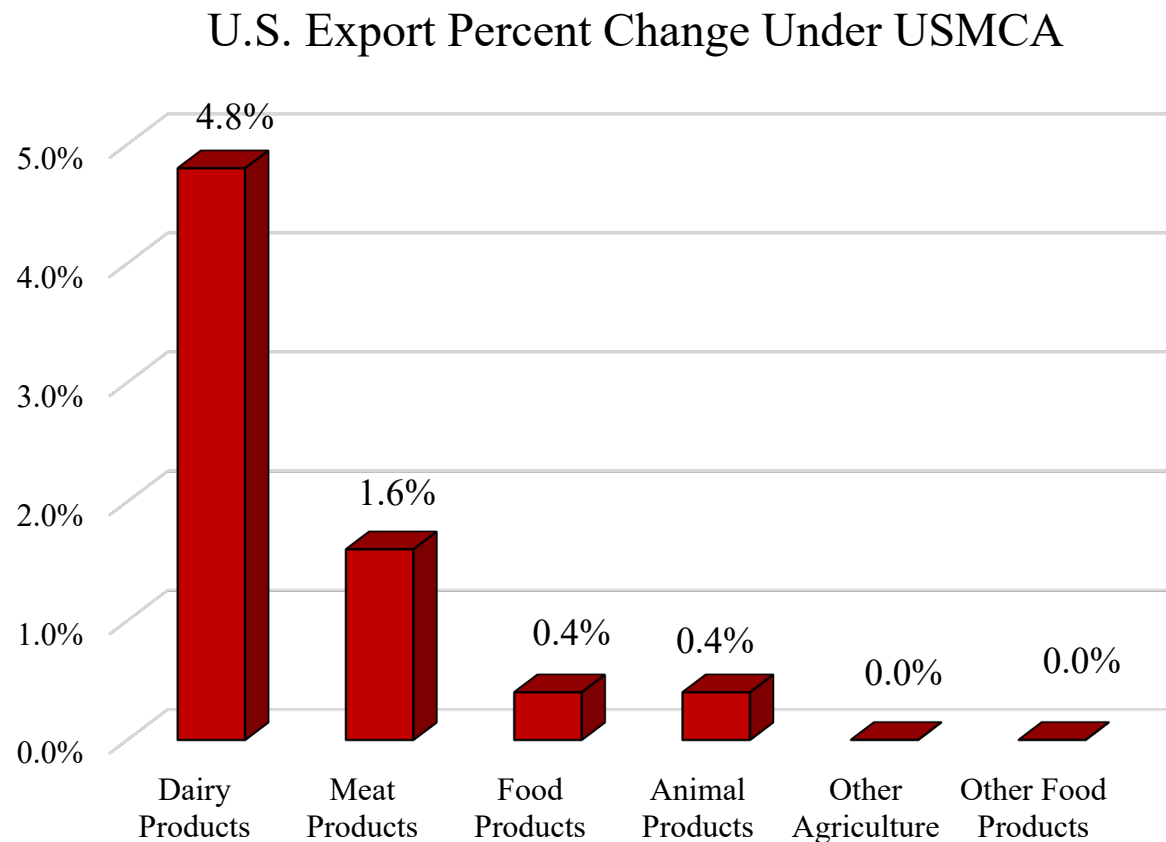
2018

- ✓ U.S. moves forward with Steel and Aluminum Tariffs
- ✓ August 27- Mexico and U.S. reach a deal
- ✓ September 30- Canada officially joins deal
- ✓ November 30- All three presidents sign deal in Argentina
- ✓ **Still needs ratified by Congress**



USMCA- Positives

- ✓ For most agricultural grain and oilseed crops there was free trade under NAFTA.
 - ✓ That remained.
- ✓ There were however some gains to livestock and meat products through expanded Tariff Rate Quotas.
- ✓ U.S. Ag Exports could increase by **\$450 million.**



Source: Chepeliev, Tyner and Mensbrugghe at University of Purdue GTAP

USMCA- But wait that's not the whole story.

Canada and Mexico Tariffs on U.S. Ag Goods

Canada Mexico

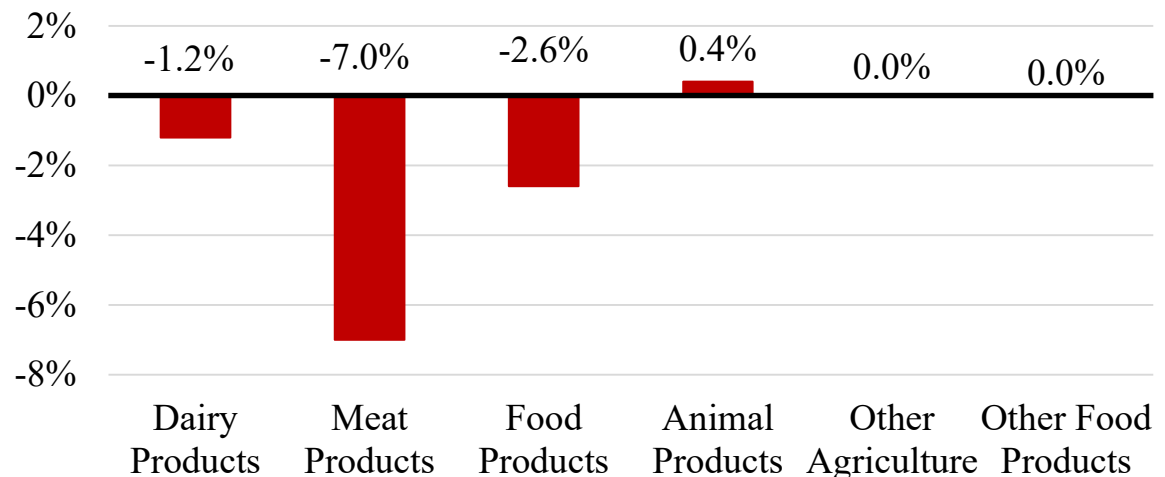
Vegetables, Fruits and Nuts	0	3.76%
Meat Products	1.65%	9.59%
Dairy Products	0.09%	6.68%
Sugar	3.38%	0.00%
Food Products	2.82%	3.08%
Beverages and Tobacco	0.72%	0.90%

Because the U.S. did not remove the steel and aluminum tariffs on Canada and Mexico, they did not remove their tariffs on our products.

The tariffs erase any gains to the industry and create export losses of roughly **\$1.8 billion.**

Source: Chepeliev, Tyner and Mensbrugghe at University of Purdue GTAP

U.S. Ag Export Percent Changes with Tariffs from Mexico and Canada



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Key Takeaways- **Maybe I gave you thinking topics.**

- ✓ Trade is important to Ohio
 - ✓ Canada and Mexico account for 51% of Ohio's trade
 - ✓ However, China has emerged as our second largest market
- ✓ Trade Deficits are a Macro-Economic Problem
 - ✓ As a country we spend too much and save too little compared to others
 - ✓ Our Comparative Advantage in Labor and Capital Goods is Shifting
- ✓ Long Run Impacts for U.S. Soybeans
 - ✓ World trade will decrease on higher world price
 - ✓ Brazil production will increase and U.S. Production will decrease on lower price
- ✓ Farm Level Impact
 - ✓ The Trade war is hurting American Producers (lower output price, higher input price)
 - ✓ Higher than normal yields and government payments helped farm income
- ✓ The Gains under USMCA won't be realized until Mexico and Canada remove their tariffs.
 - ✓ And they won't remove their tariffs until the U.S. removes the steel and aluminum tariffs

So Ben, if Tariffs wont work, then what can we do?

- ✓ Encourage our fellow trading partners to put pressure on Chinese production practices through the World Trade Organization
- ✓ Use Multilateral Trade Packs like TPP, KORUS, and USMCA to bring down trade barriers and compete with China
 - ✓ Basically create a second bully
- ✓ Invest in job training programs to transition industries where the U.S. is losing it's comparative advantage
- ✓ Solve the National Financial Deficit
 - ✓ Never a popular option, because everyone always wants the cuts to come from somewhere else.

Who has the first question? I'm all ears.

