

Midwest Agriculture's Ties to the Global Economy

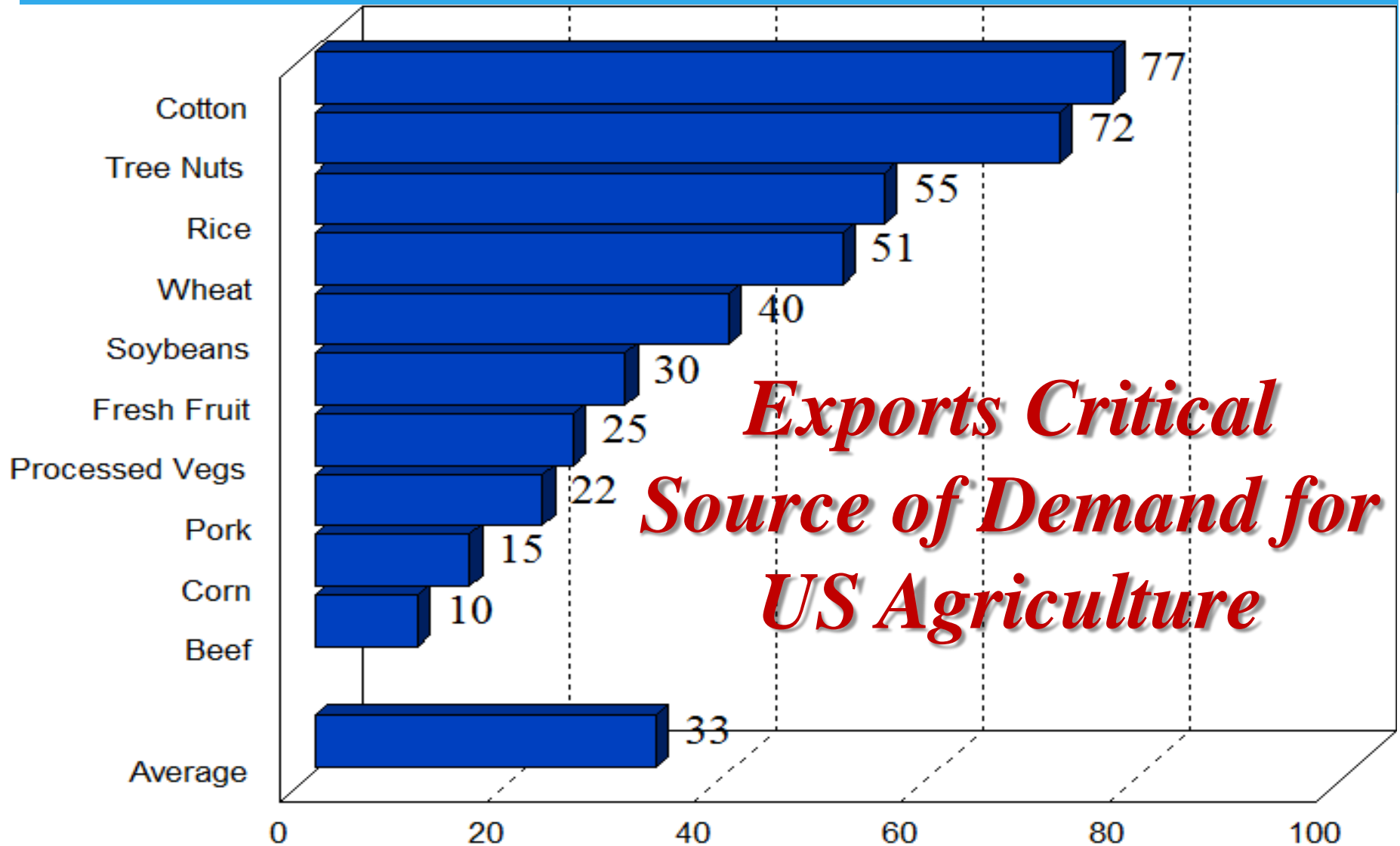
*Trends in Ag Trade
& Drivers of Demand*

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Texas A&M

Overview

- *Importance of Trade to US Agriculture*
- *Competitive Forces*
- *Trade Policies*
- *The Future?*

Export Share of US Production, 2011-13

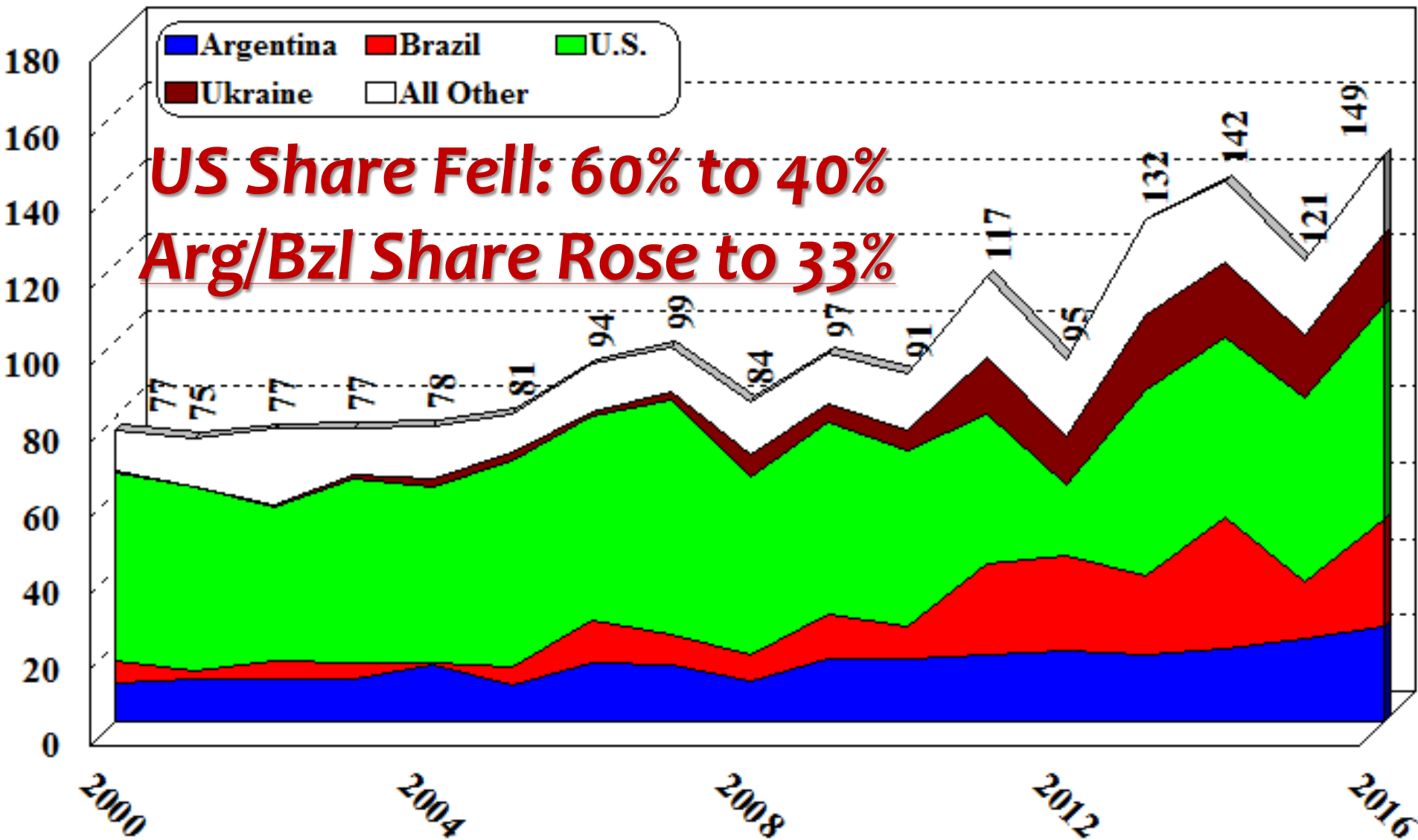


Competition, GMOs & Infrastructure



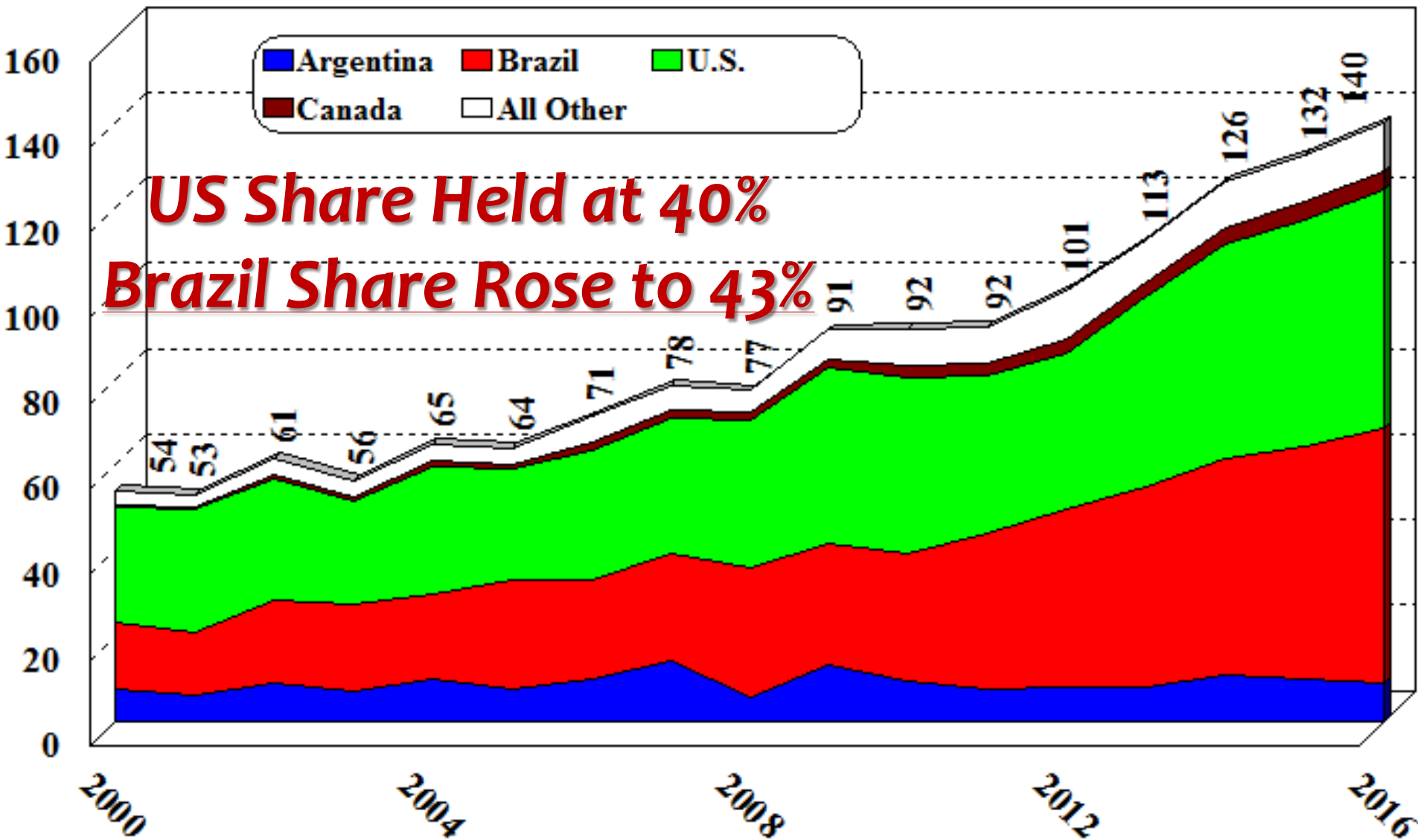
World Corn Exports

Million Metric Tons



World Soybean Exports

Million Metric Tons



DEVELOPING COUNTRIES GREW MORE BIOTECH CROPS IN 2016

19 DEVELOPING COUNTRIES

99.6 MILLION HECTARES

7 INDUSTRIAL COUNTRIES

85.5 MILLION HECTARES

TOP 5 COUNTRIES GROWING BIOTECH CROPS:

USA (72.9 Million Hectares)

Brazil (49.1)

Argentina (23.8)

Canada (11.6)

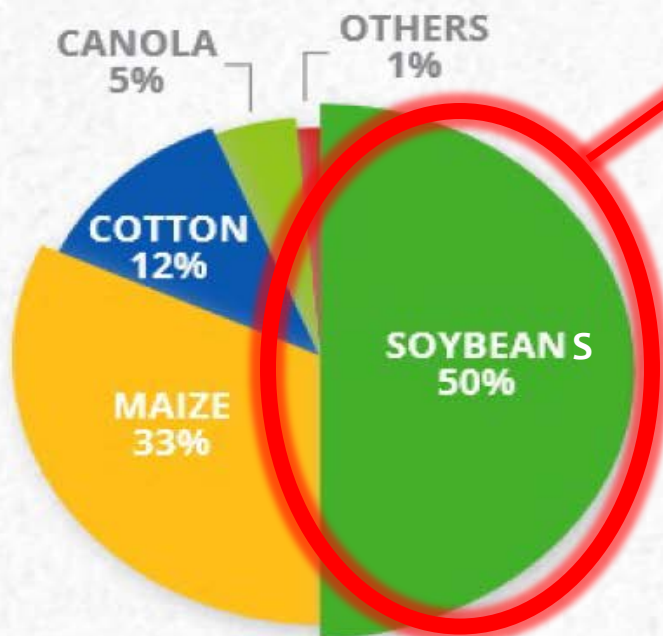
India (10.8)

185.1 MILLION HECTARES

3 OF THE TOP 5 COUNTRIES GROWING BIOTECH CROPS ARE DEVELOPING COUNTRIES

BIOTECH CROPS INCREASED ~110-FOLD FROM 1996-2016;
ACCUMULATED AREA IS 2.1 BILLION HECTARES

MAJOR BIOTECH CROPS



BIOTECH SOYBEAN

REACHED **50%** OF GLOBAL BIOTECH CROP AREA IN 2016

OTHER BIOTECH CROPS IN THE MARKET:



SUGAR BEET



PAPAYA



SQUASH

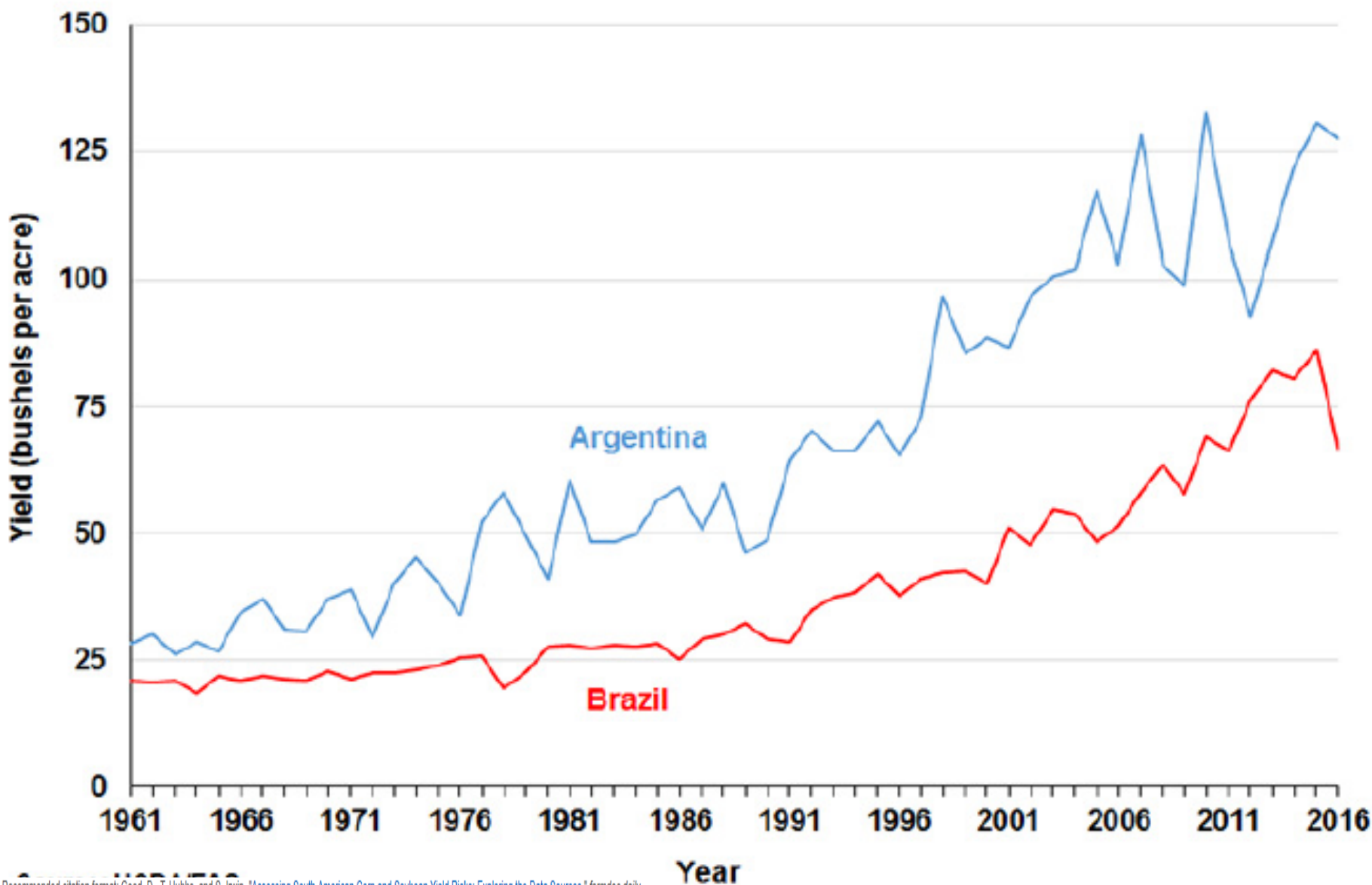


EGGPLANT



POTATO

Figure 1. National Average Corn Yield for Argentina and Brazil, 1961-2016



Corn for Grain Yield

United States

Bushels per Acre

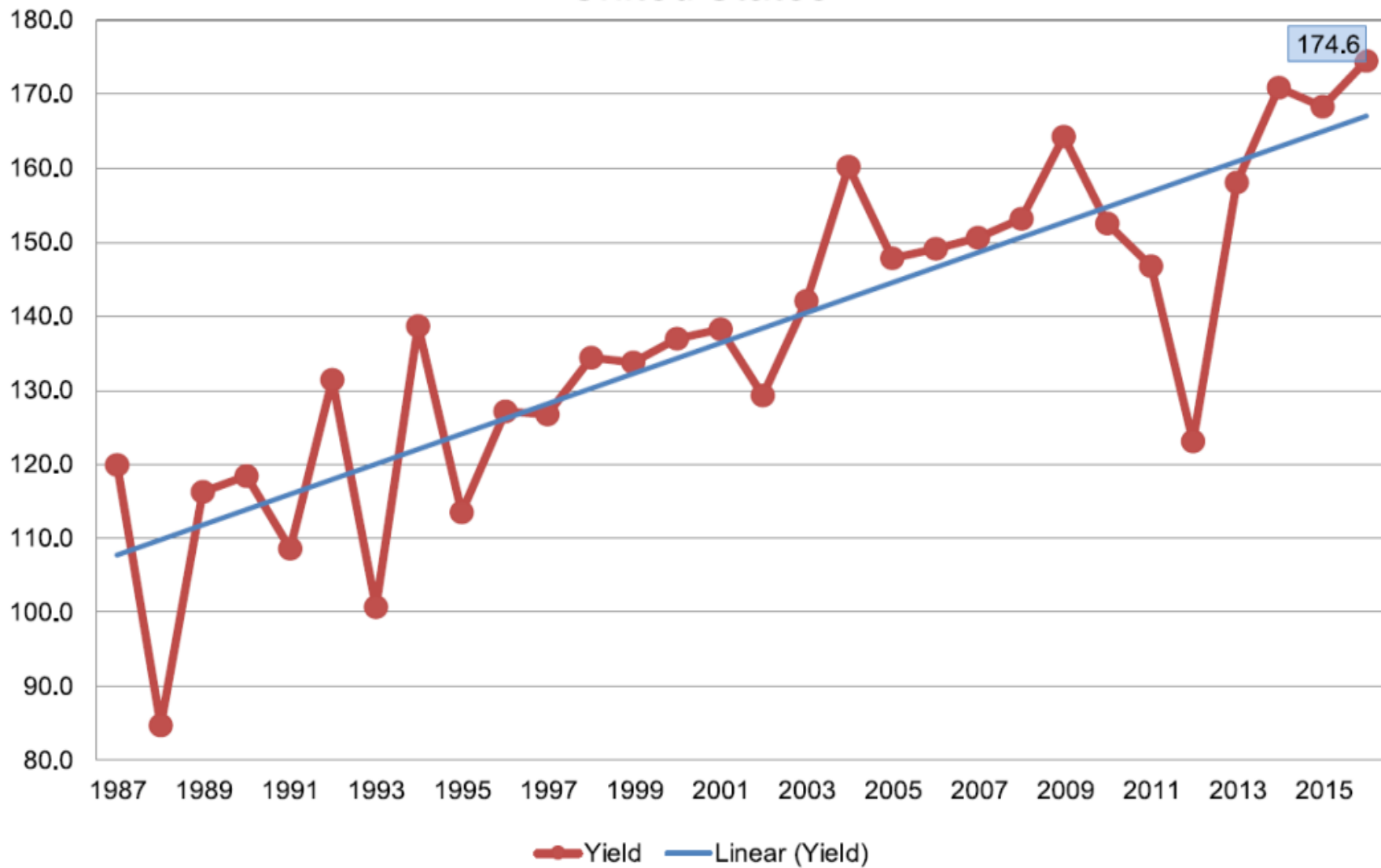
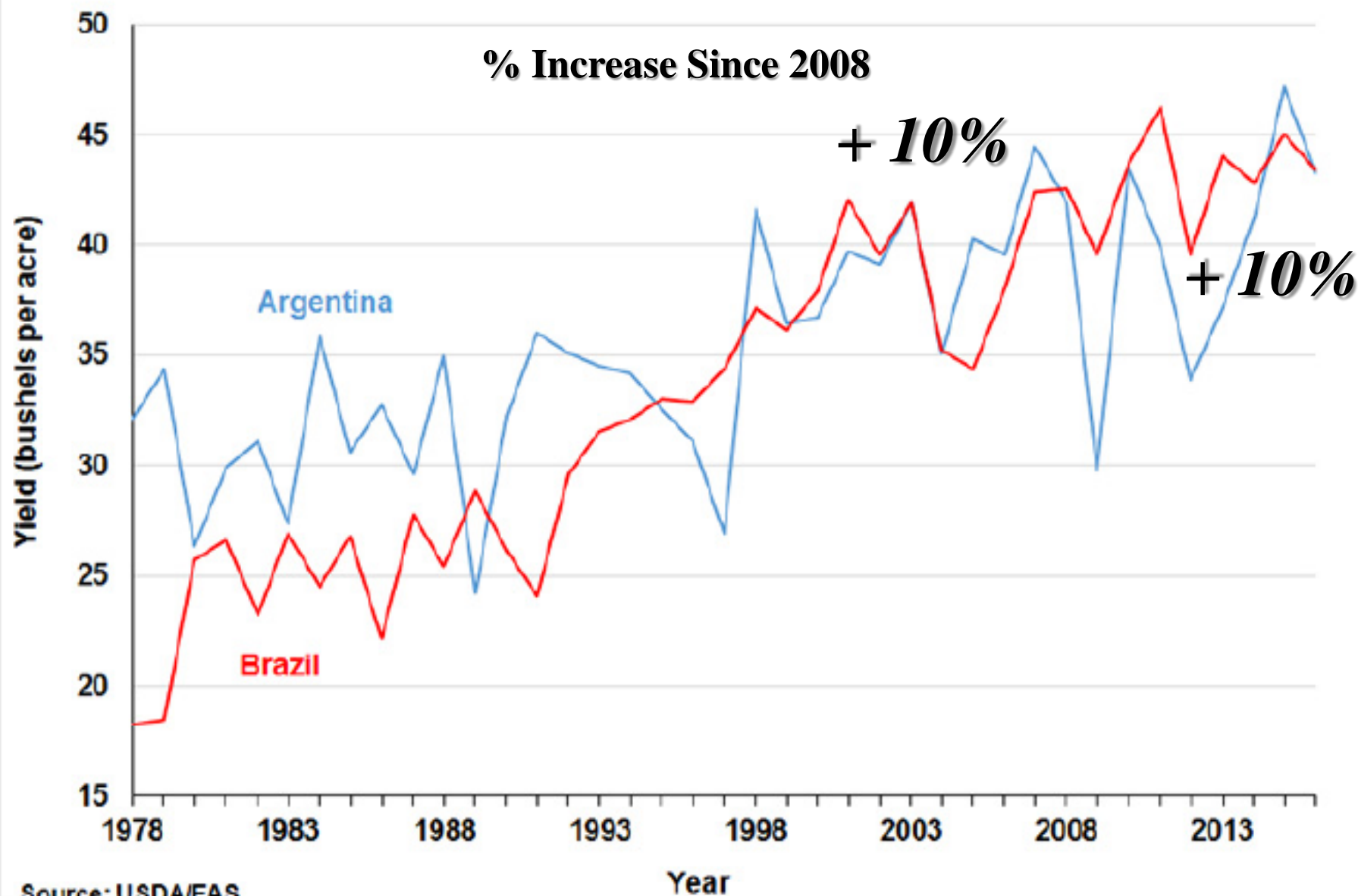
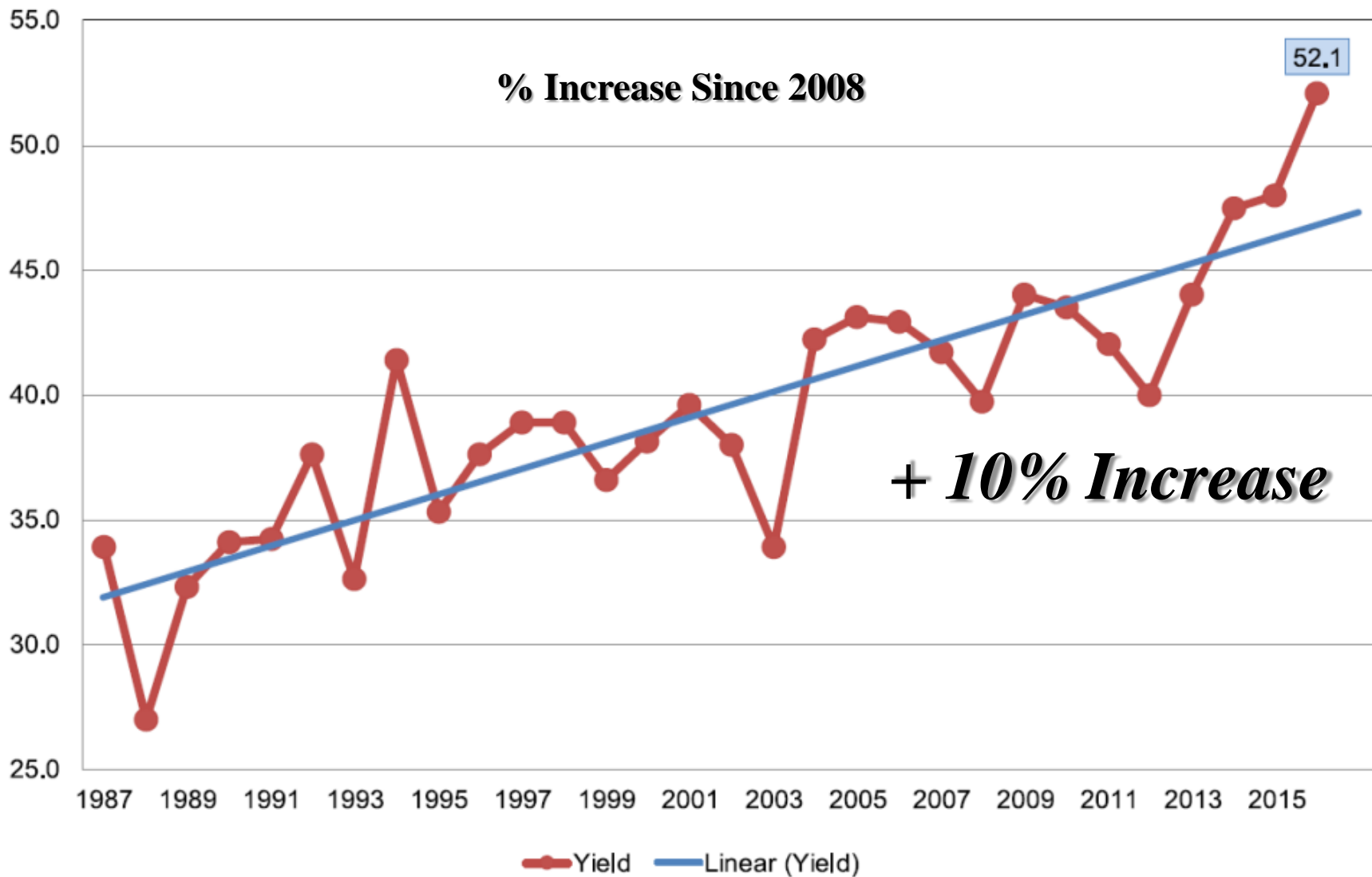


Figure 2. National Average Soybean Yield for Argentina and Brazil, 1978-2016



Soybean Yield United States

Bushels per Acre



BR-163

Ministério
dos Transportes



**40% of Northern Port
Capacity Unused
17 mmt**

***Harvested Area
Expansion***

Argentina: 20%
United States: 20%
Brazil: 60%

Cerrado

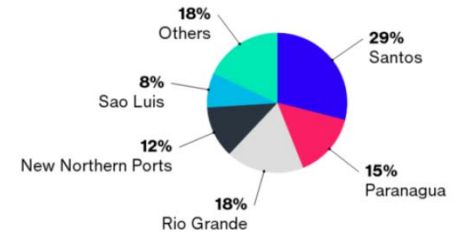
Porto Alegre

Convenção p/
Rodovias Federais

- Duplicadas
- em Duplicação
- Pavimentadas
- Pavimentação
- Implantadas
- em Leito Natural
- Planejadas

Brazil's Soybean Trail

Shipments by port, in % of total exports*



Source: Anec
*From Jan.-Nov. 2016

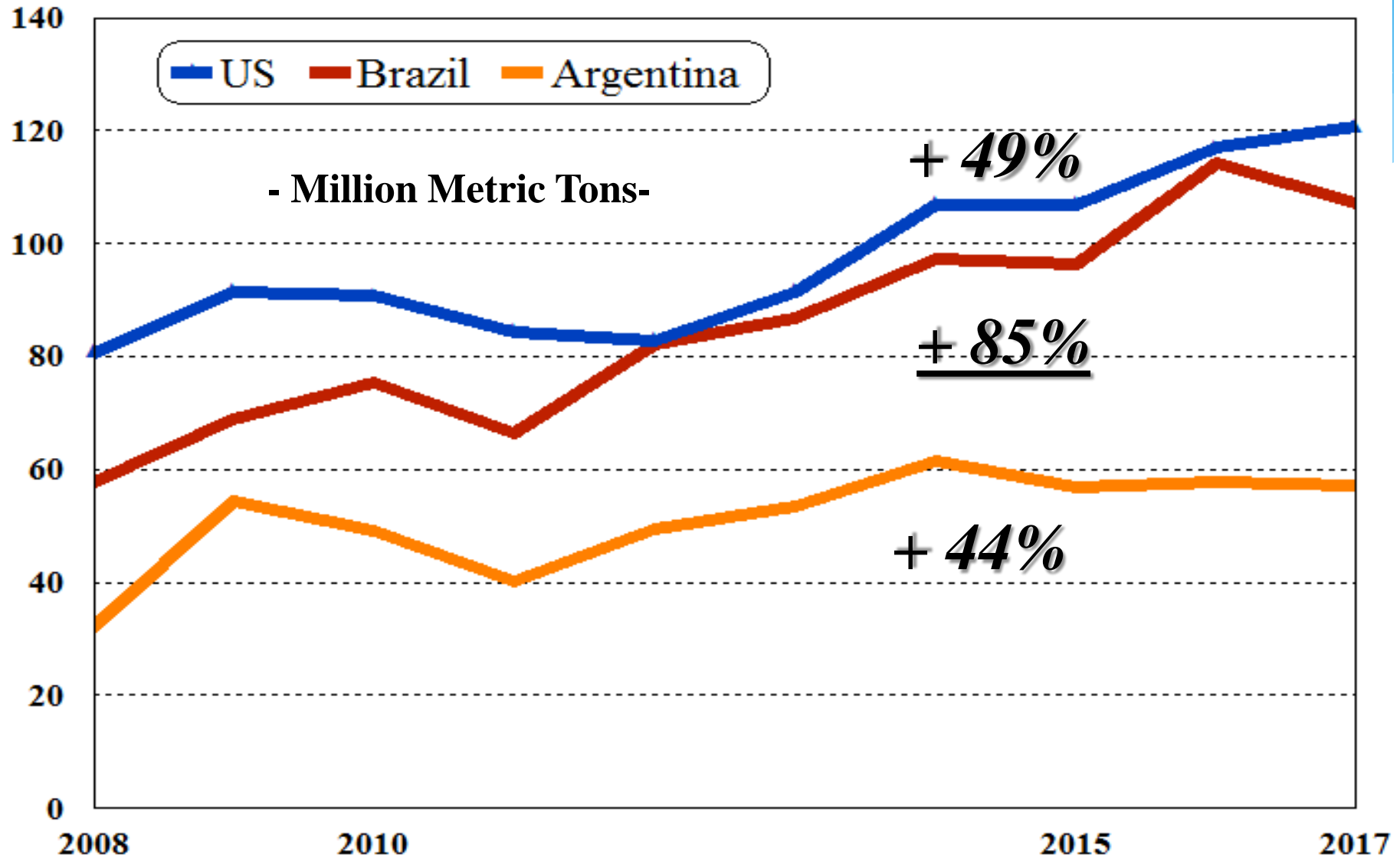
Bloomberg

CUIABÁ	1767 km
BRASÍLIA	2910 km
RIO	4114 km
SÃO PAULO	3922 km
CURITIBA	4330 km
FLORIANÓPOLIS	4630 km
PORTO ALEGRE	5045 km

Valor



Soybean Production & % Increase

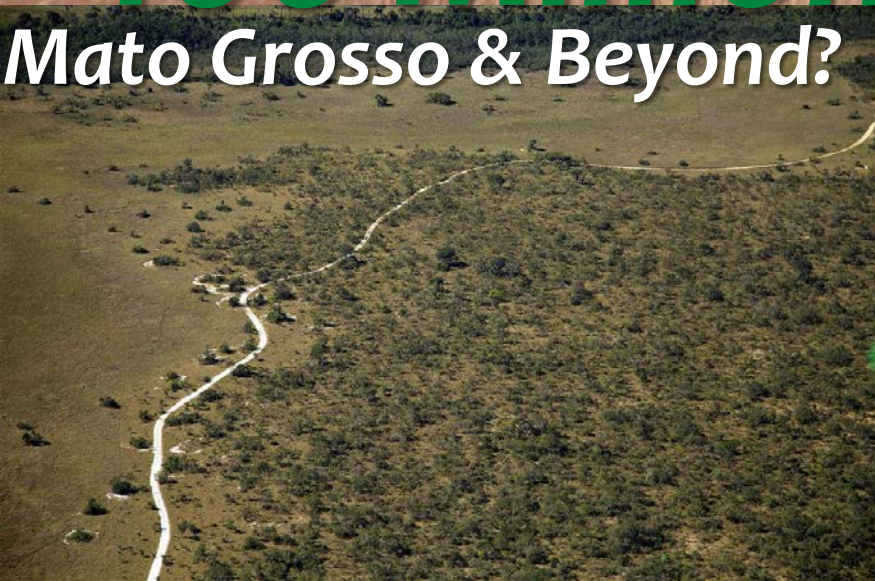


Is the Future Now?!

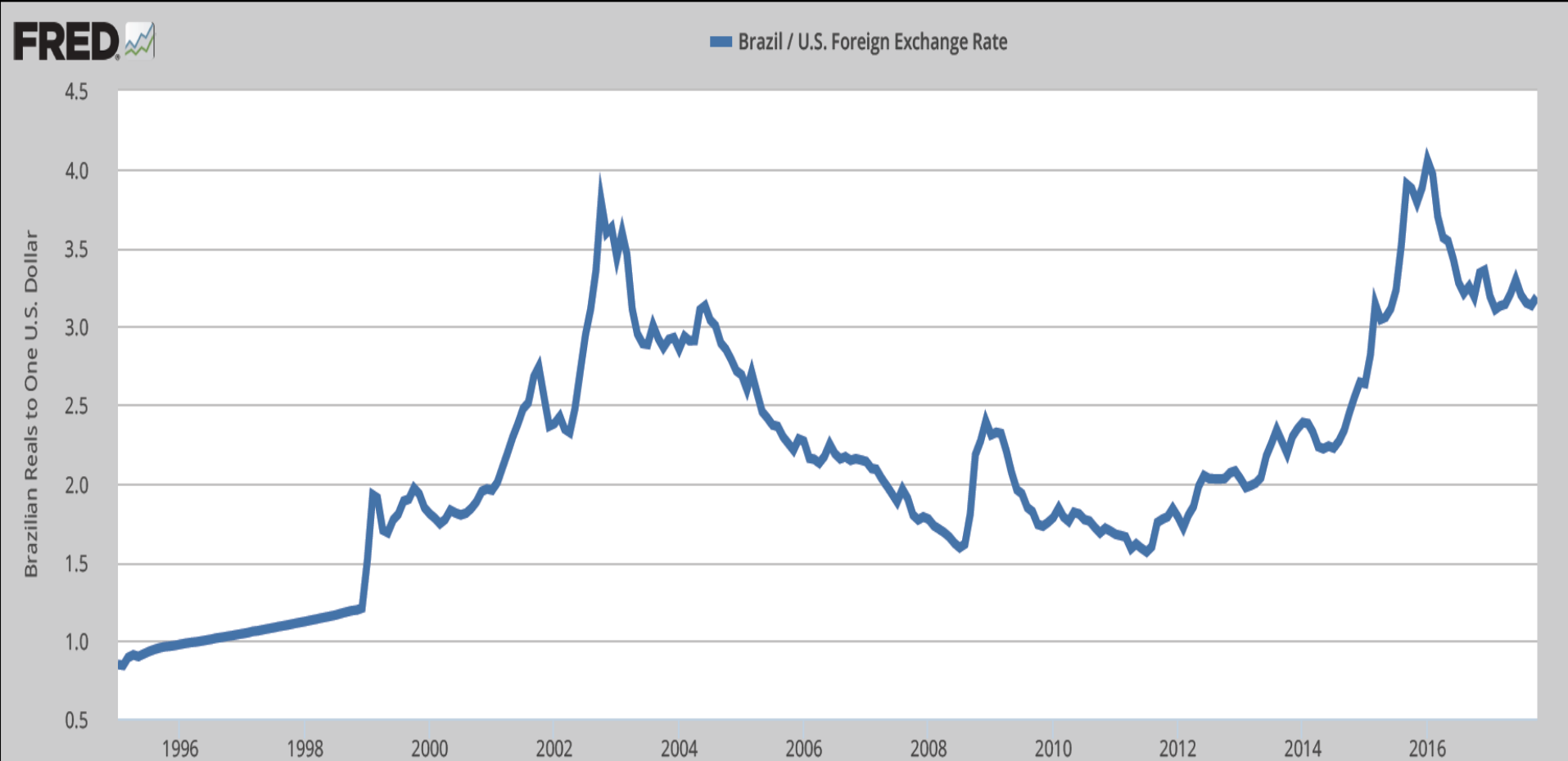
***Production Increases Driven by
Yield & Area Expansion***

100 Million More Acres?

Mato Grosso & Beyond?



Exchange Rates Are Important

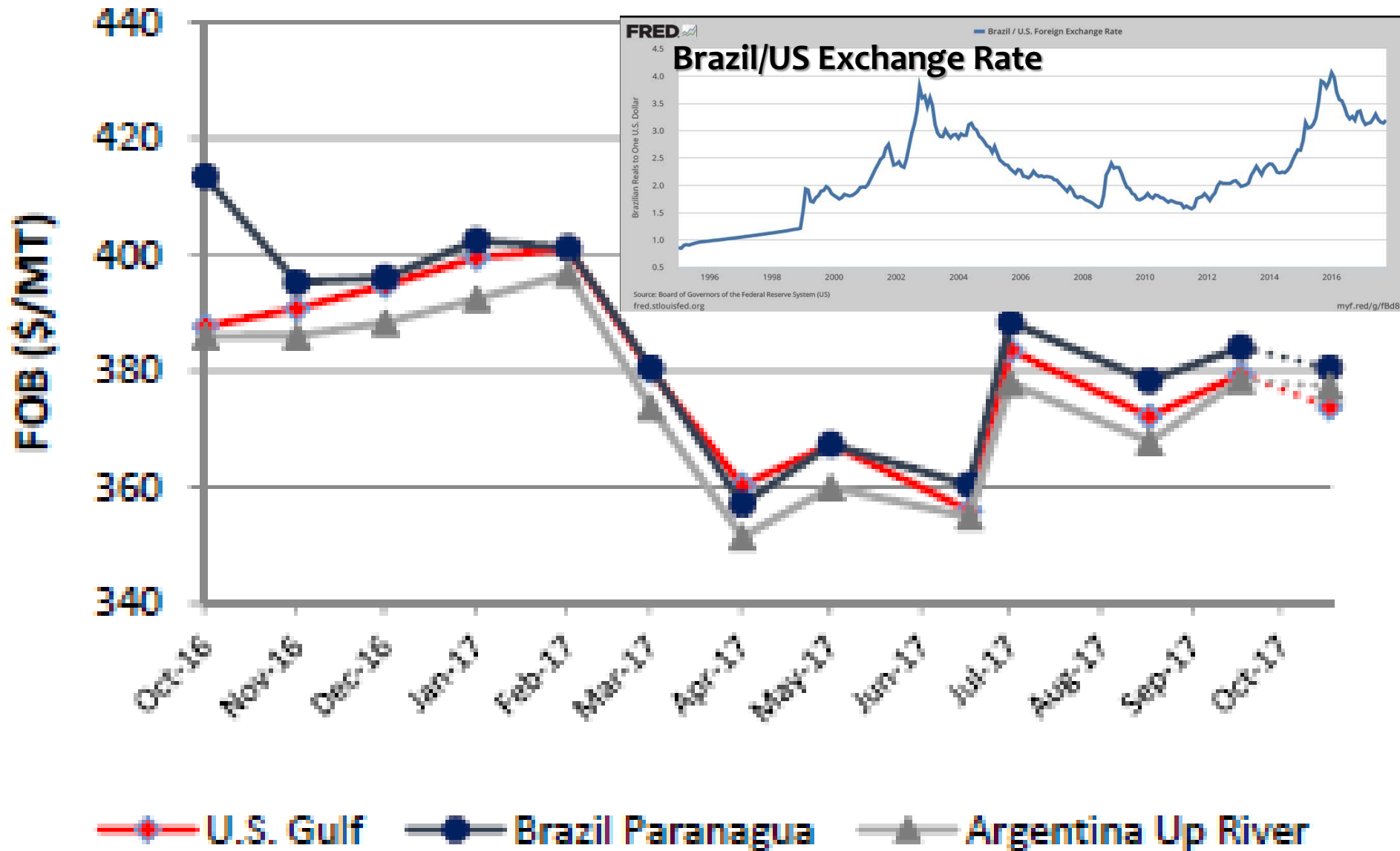


Source: Board of Governors of the Federal Reserve System (US)

fred.stlouisfed.org

myf.red/g/fBd8

Soybean Export Prices



Oilseeds: World Markets & Trade, USDA, Foreign Ag Service, Oct 2017.

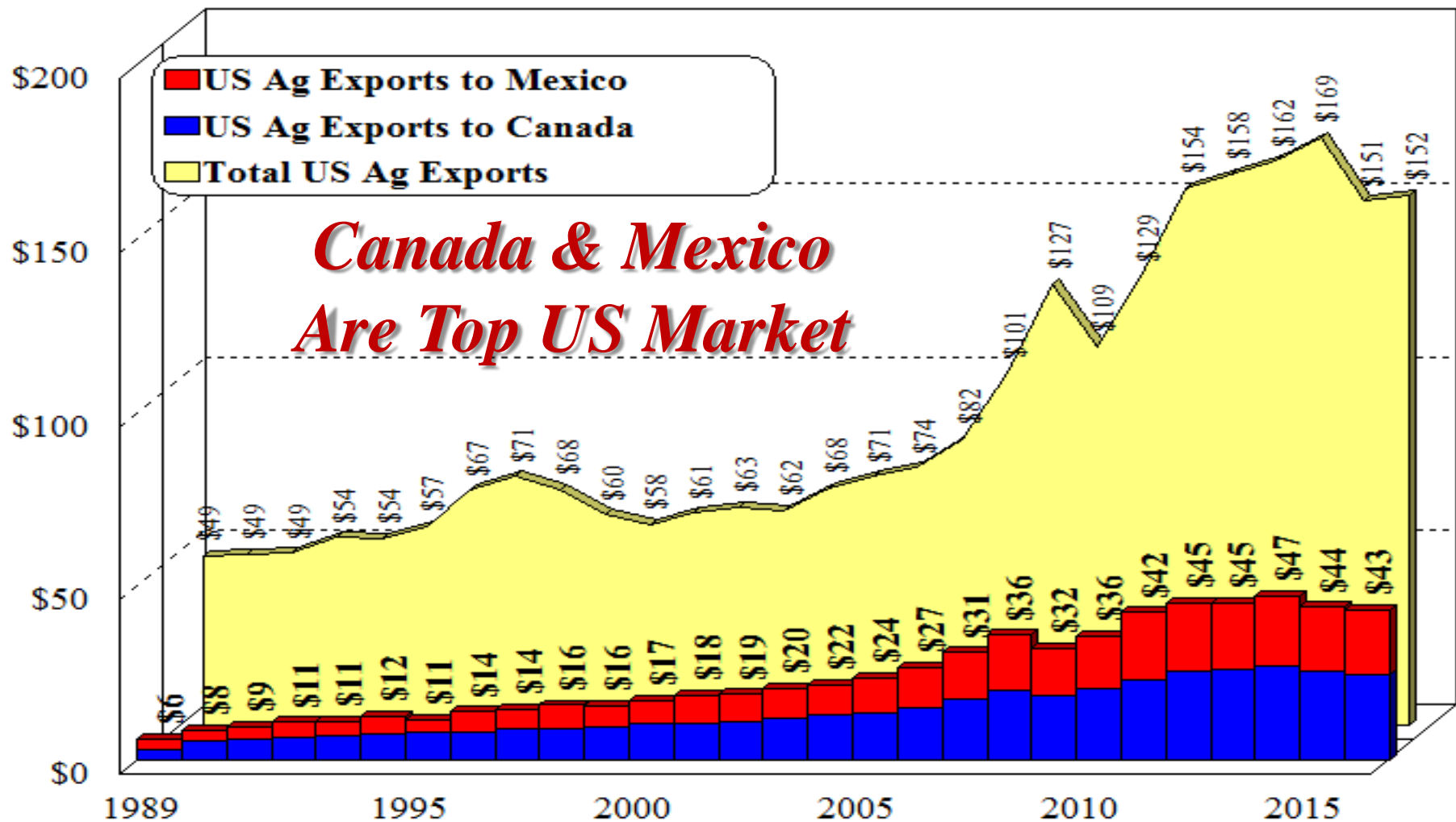
Importance of Trade Policy

Renegotiations: A New Path Ahead?



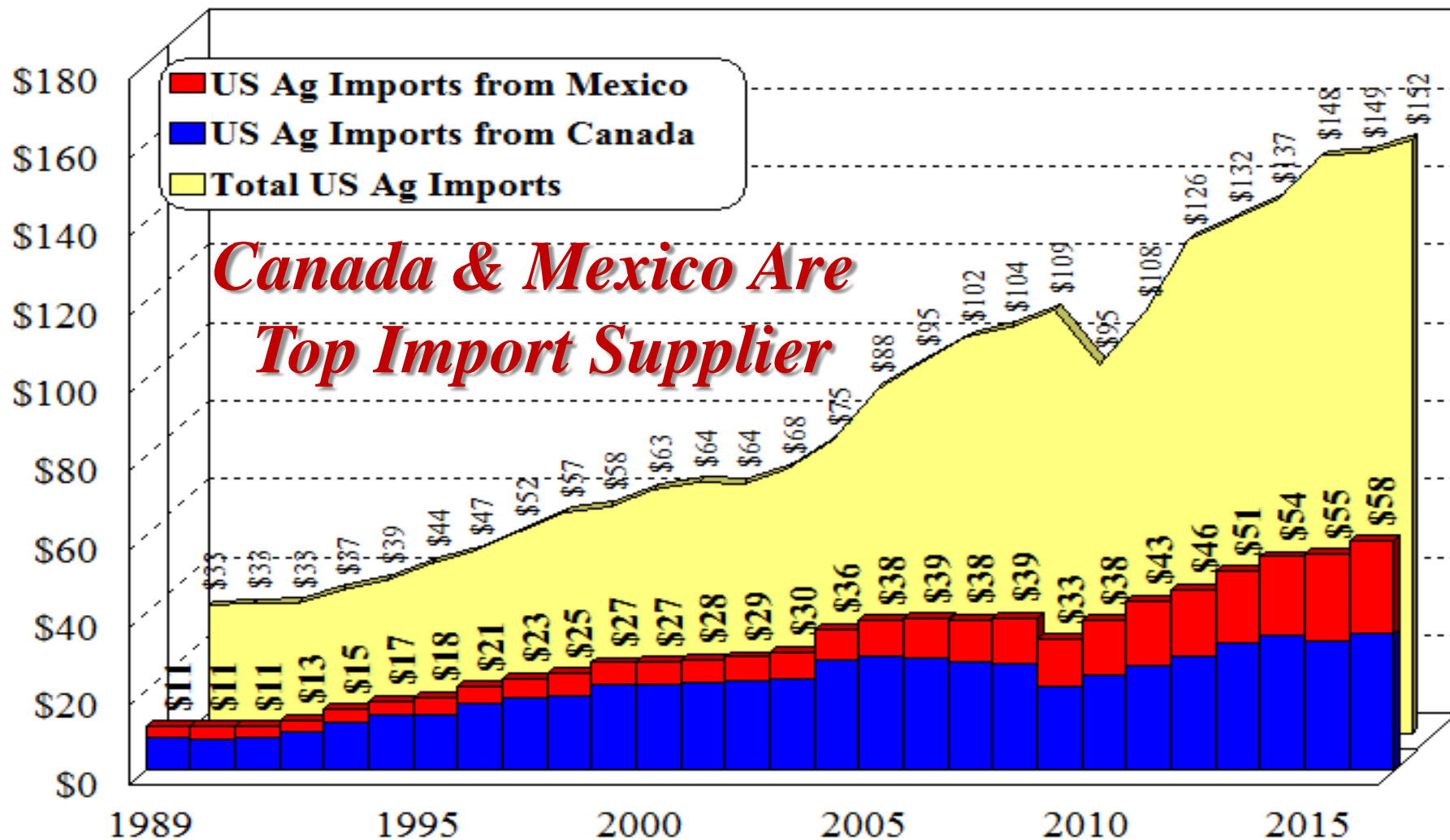
US Ag Exports to NAFTA

Billion Dollars



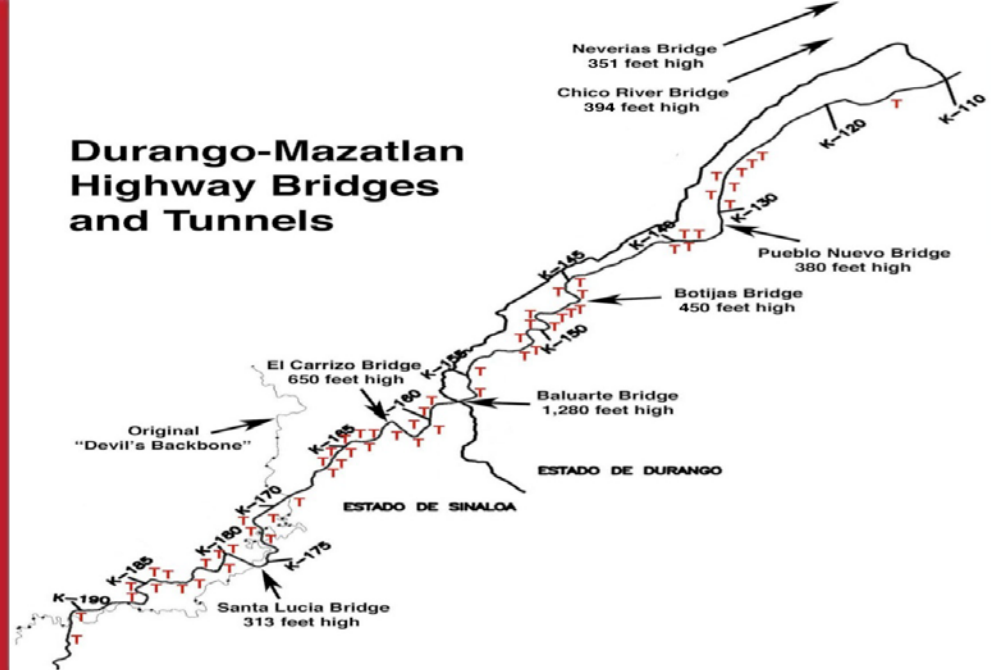
US Ag Imports from NAFTA

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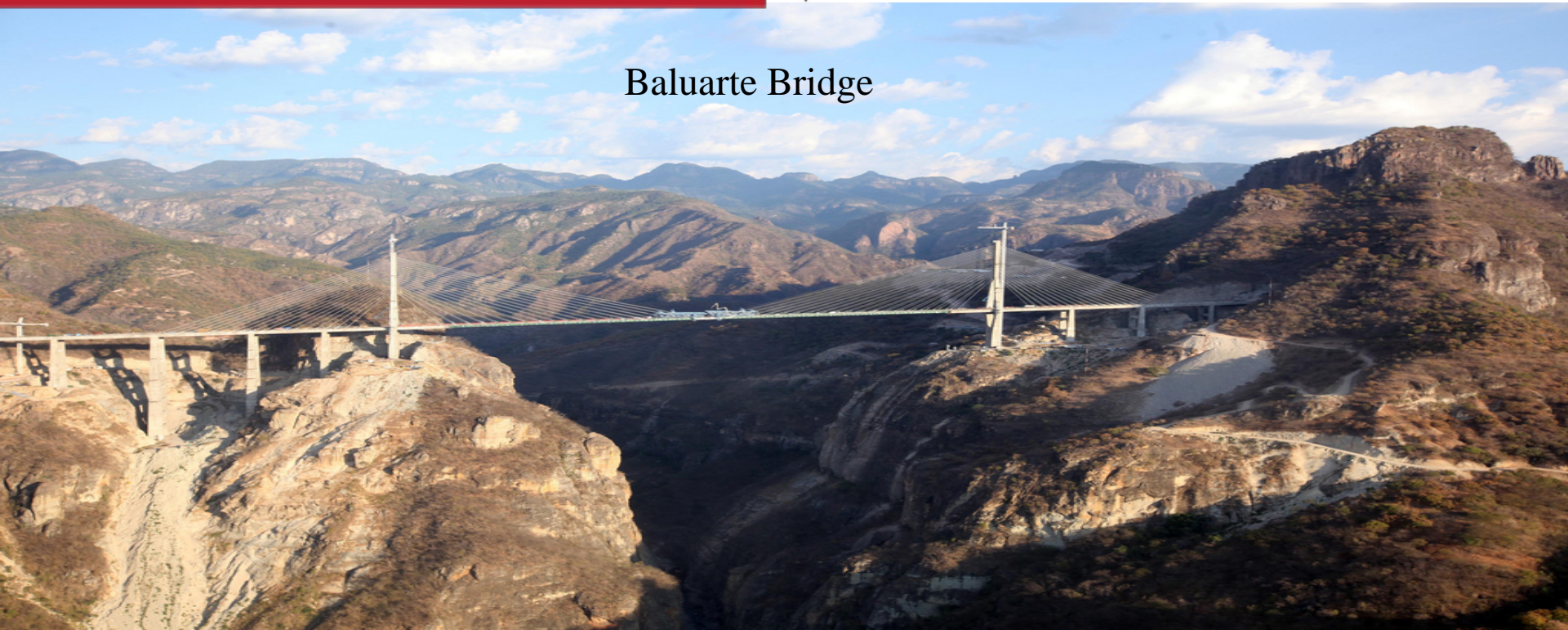


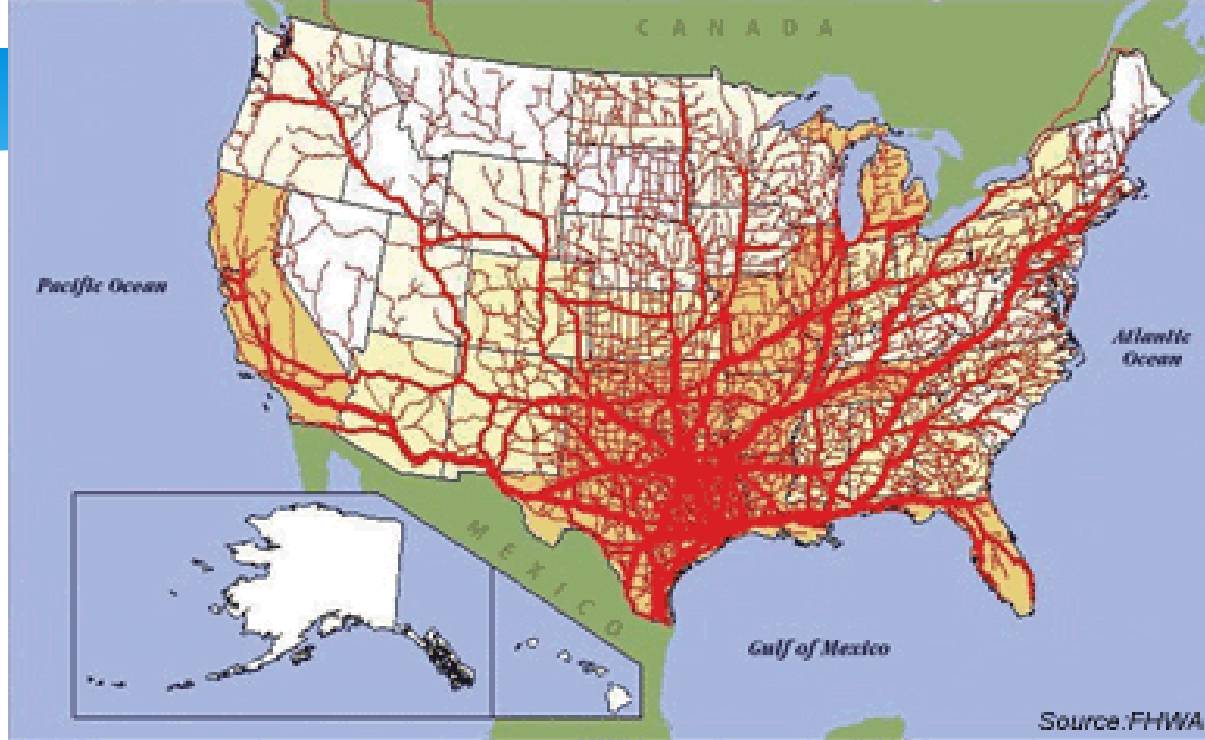


Durango-Mazatlan Highway Bridges and Tunnels



Baluarte Bridge





Pharr-Reynosa International Bridge on the Rise
Pharr, Texas – Reynosa, Tamaulipas

McAllen-Hidalgo-Reynosa Bridge
Hidalgo, Texas – Reynosa, Tamaulipas



The United States is shown at the bottom of the photo.

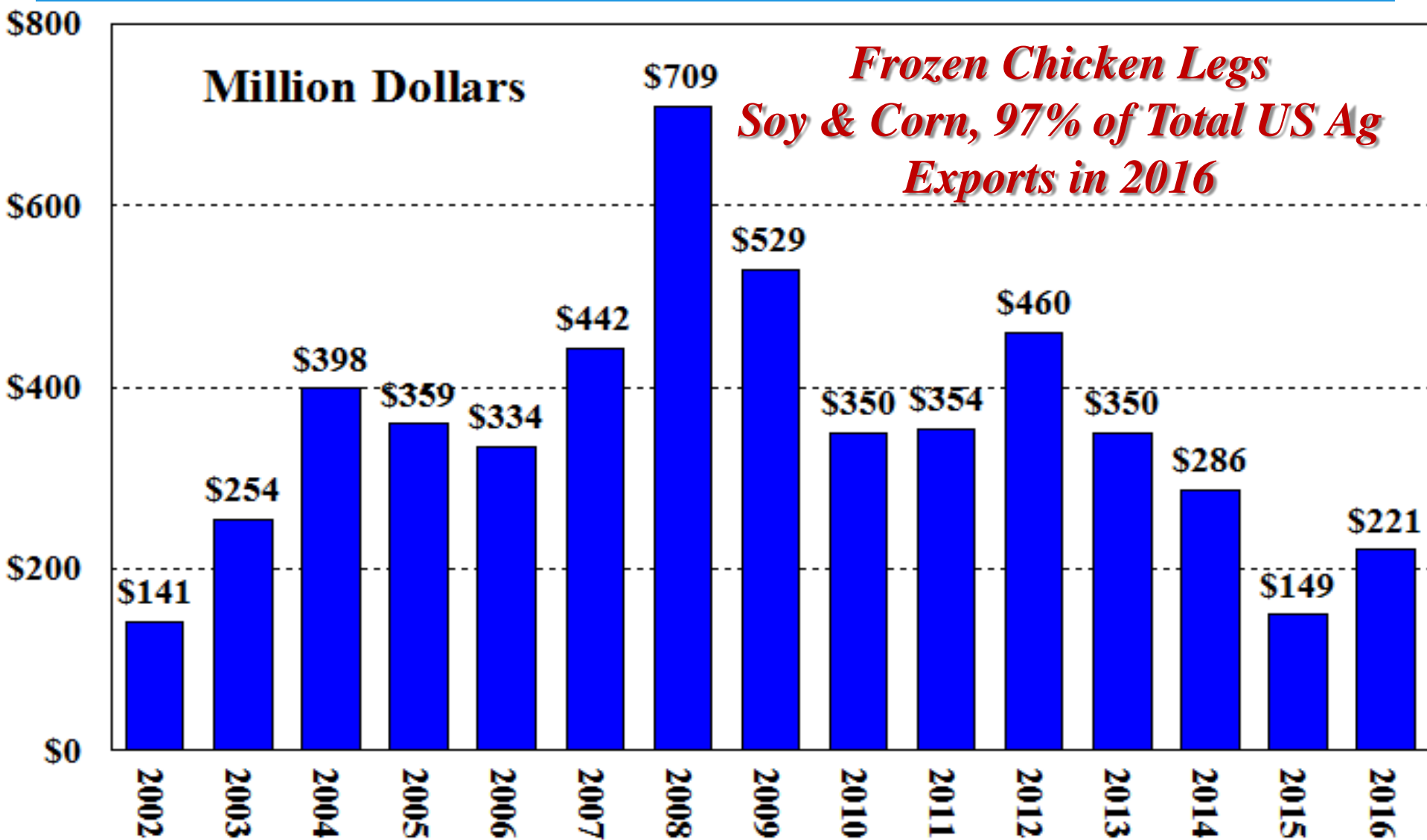


The United States is shown at the bottom of the photo.

*Cuba: A Market,
Investment Opportunity,
Spy Land, Competitor or
All of the Above?*



Cuba Market Opportunities

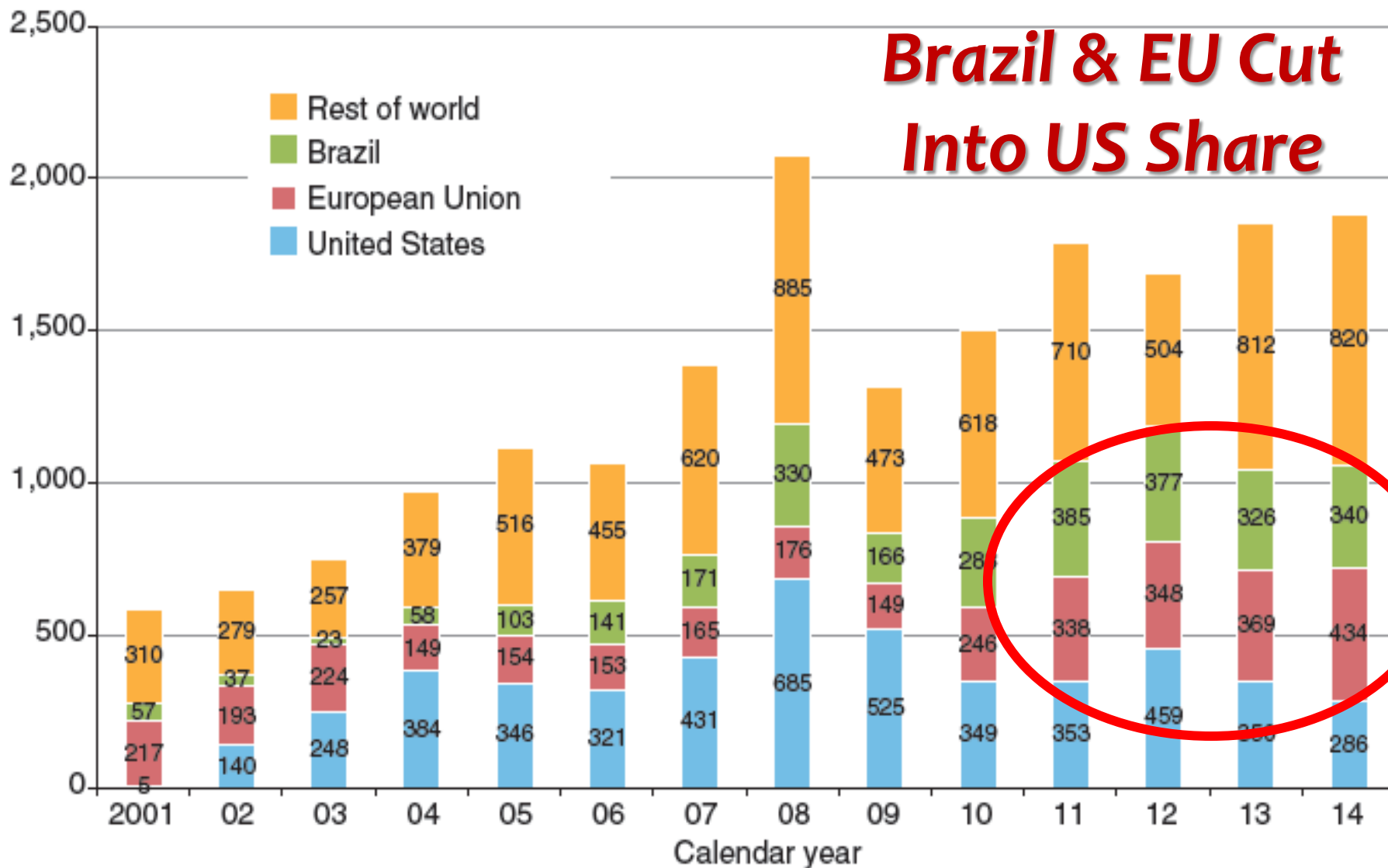


Note: Total exports to Cuba include small amounts of non-ag/related exports.

Source: U.S. Census Bureau, Foreign Trade, U.S. Trade in Goods by Country, www.census.gov/foreign-trade/balance/

Cuba's agricultural imports have trended upward over the past decade

Millions of dollars



Sources: USDA/FAS (2015a) and export data of various national governments, as cited by Global Trade Information Services (2015).

Big Questions

- **More GMO Adoption?**
- **Switch from Grazing, Adding Cultivation in Brazil?**
- **US Trade Policy: Responses by Trading Partners & Competitors?**

The Future

- ✓ **US Ag Remains Export Dependent**
- ✓ **Infrastructure Poses Unique Challenges**
- ✓ **Climate & Weather Retain Influence**
- ✓ **Farm Policy & Regulation Crucial**
- ✓ **US Farm Financial Situation Precarious**