



United States Department of Agriculture



# Agricultural Marketing Service

## The Importance of Transportation to Agriculture

Illinois Agricultural Leadership Program

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Washington, DC

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USDA/AMS

# Transportation Services Division (TSD)

The screenshot shows the USDA Agricultural Marketing Service website. The header includes the USDA logo, navigation tabs for Market News, Rules & Regulations, Grades & Standards, Services, Resources, and Selling Food to USDA, and a search bar. The main content area is titled "Transportation Research & Analysis" and features a large image of a port with ships. Below the image, there is a description of the TSD's role as the definitive source for economic analysis of agricultural transportation. The page also includes sections for "Reports of Interest" and "News & Announcements" with a list of recent updates.

Analysis and market reports:

- § U.S. grain
- § Brazil & Mexico grain analysis
- § Modal share analysis
- § Commodity and port profiles
- § Rail studies
- § Study of Rural Transportation Issues

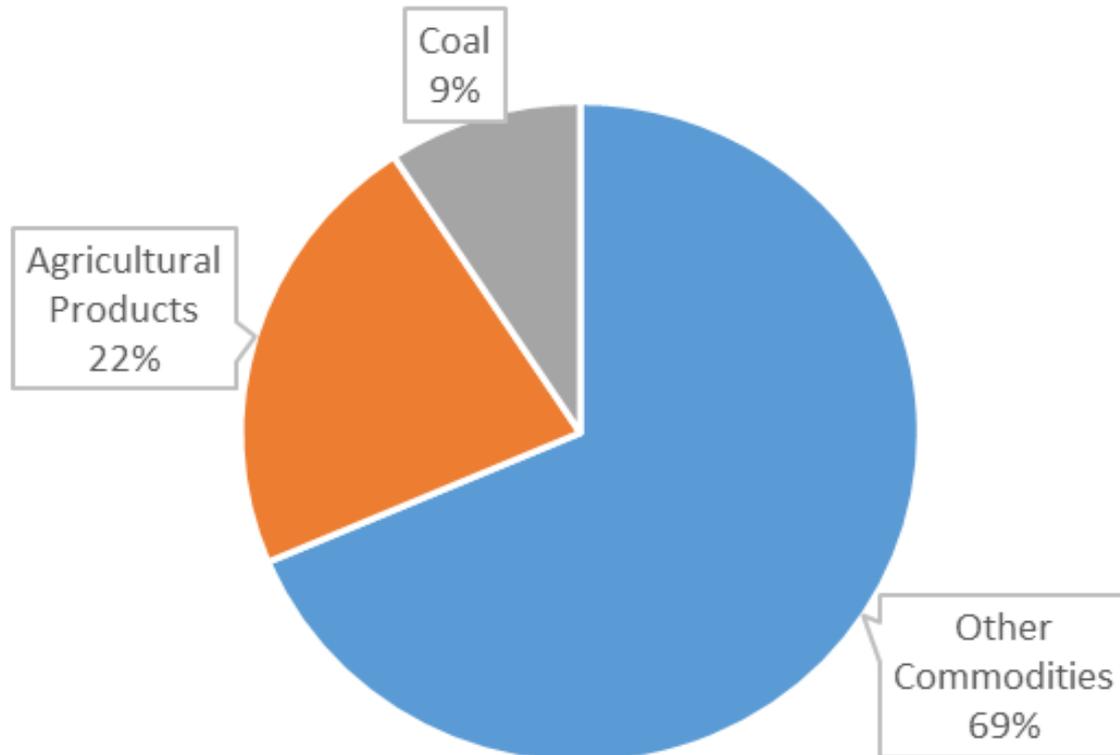
STB filings

Cooperative research agreements

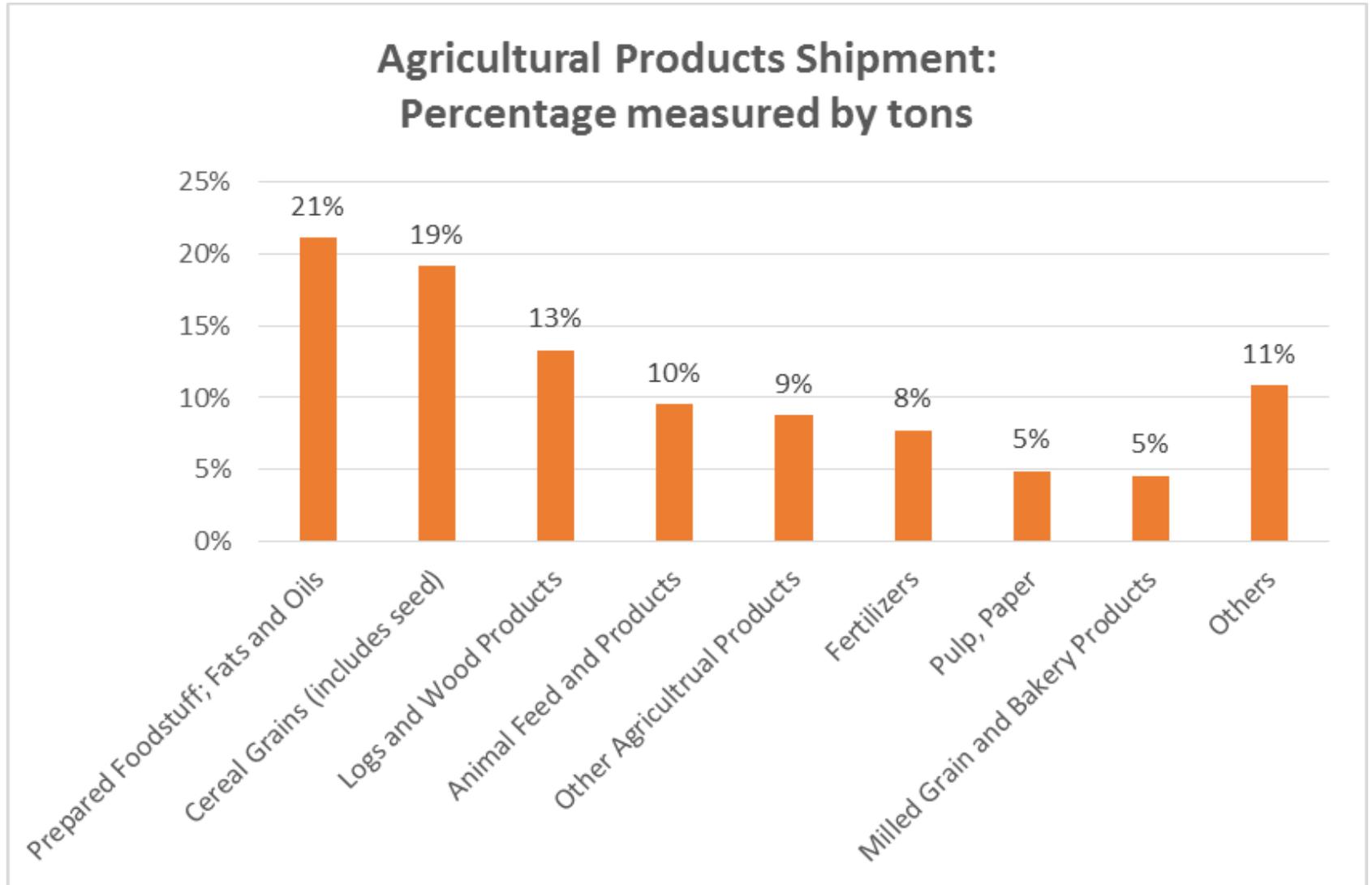
Data

# Agriculture is Largest Sector User of Freight

Commodity Shipment, 2012  
Percentage measured by tons

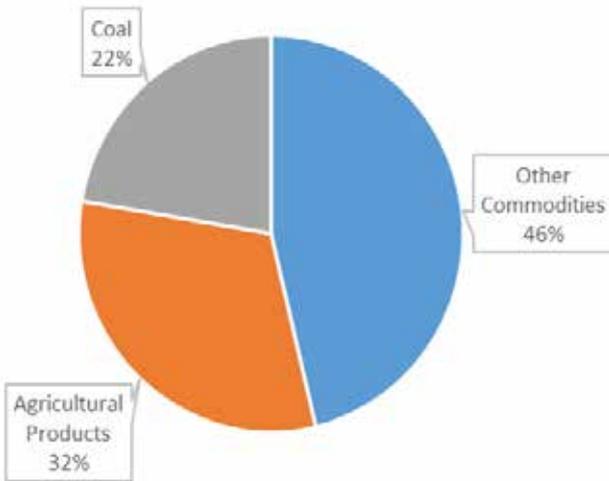


# What Agriculture Moves

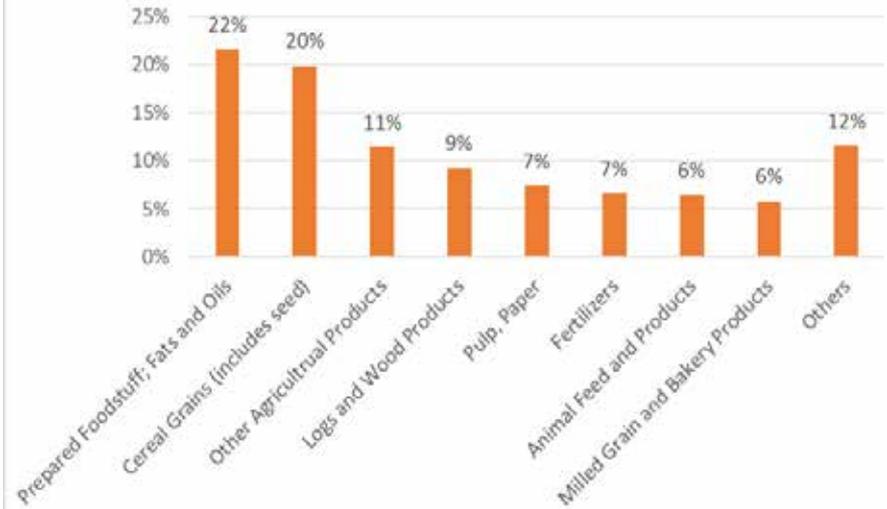


# Agricultural Freight, Ton-Miles

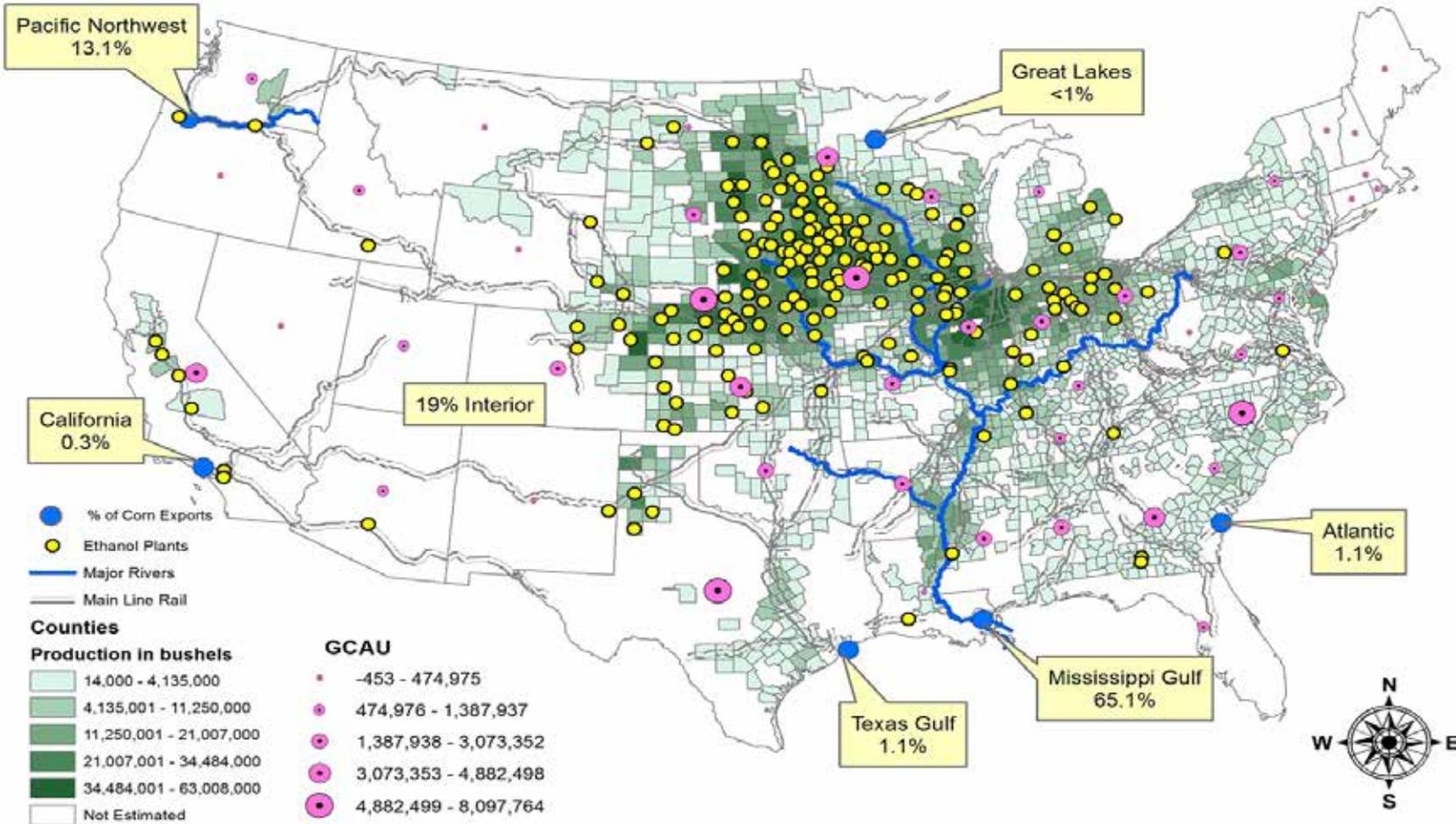
Commodity Shipment, 2012  
Percentage measured by ton-miles



Agricultural Products Shipment:  
Percentage measured by ton-miles

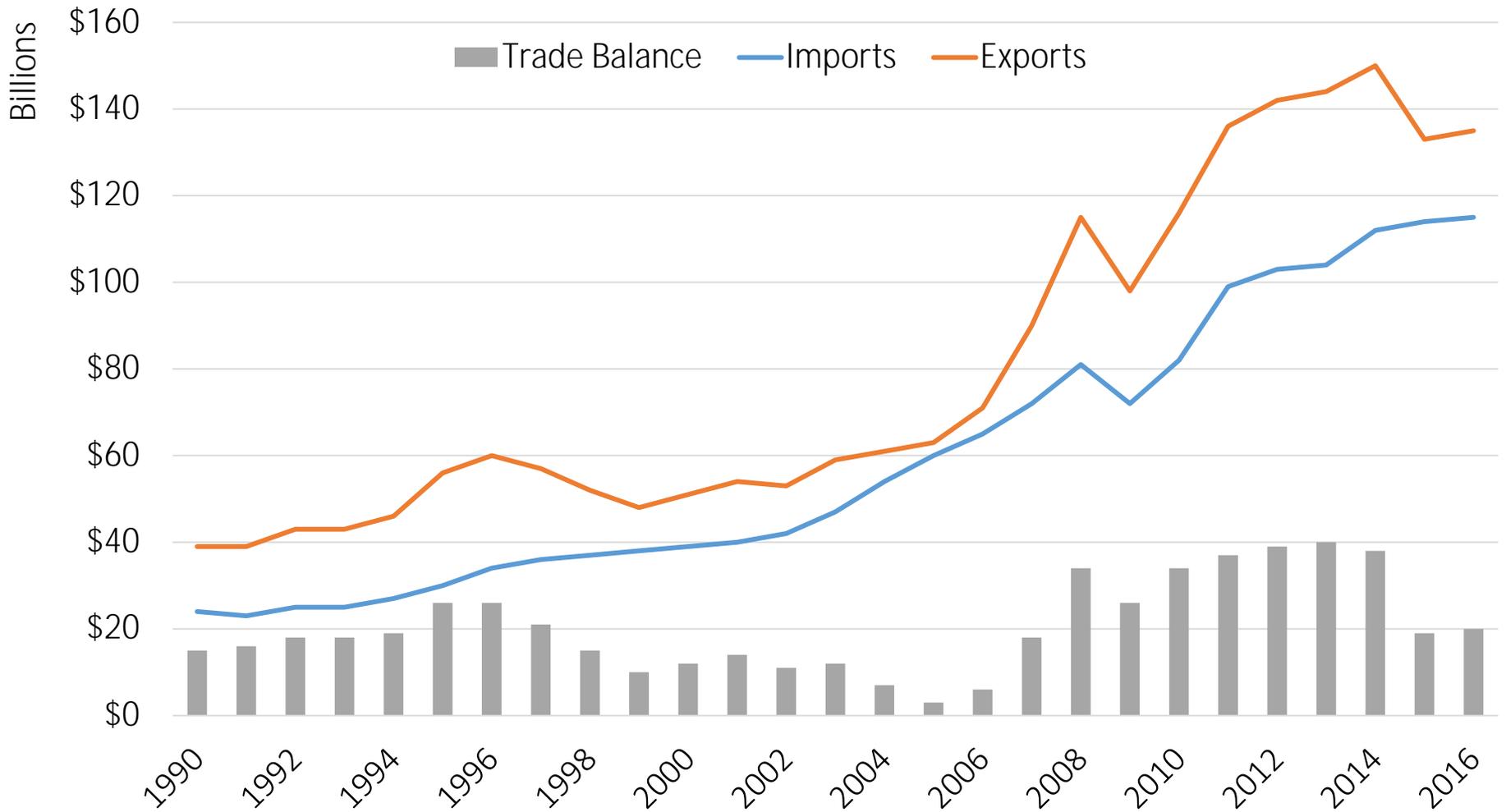


# Corn production, ethanol plants, export ports, grain consuming animal units, and the transportation system, 2013

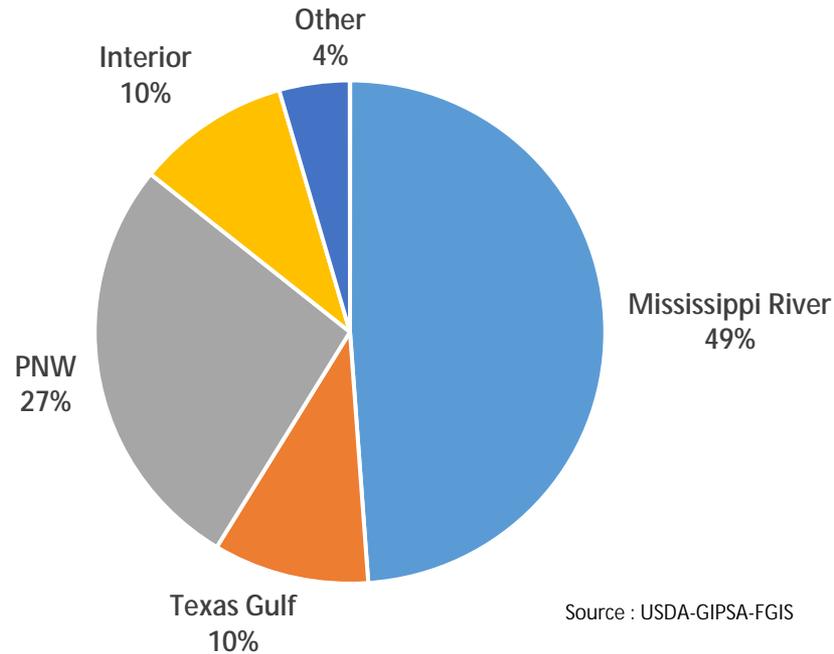


Source: USDA/AMS analysis of data from USDA National Agricultural Statistics Service State and County level Statistics 2013, and Federal Grain Inspection Service Port Inspection data, 2013.

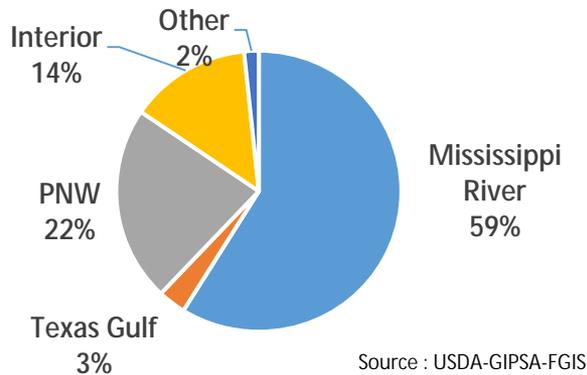
# U.S. Agricultural Trade



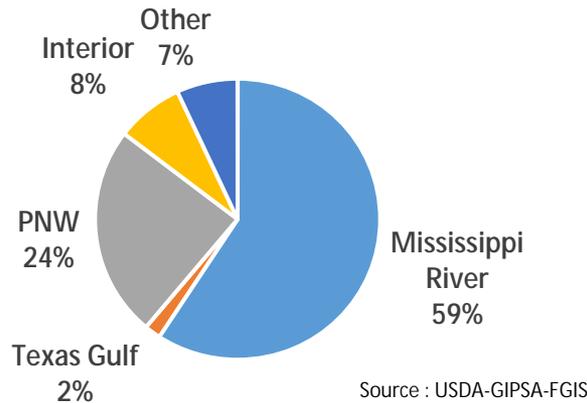
## 2016 GRAIN EXPORTS



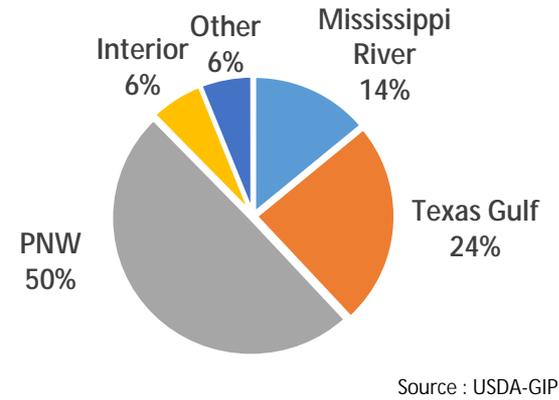
## 2016 CORN EXPORTS



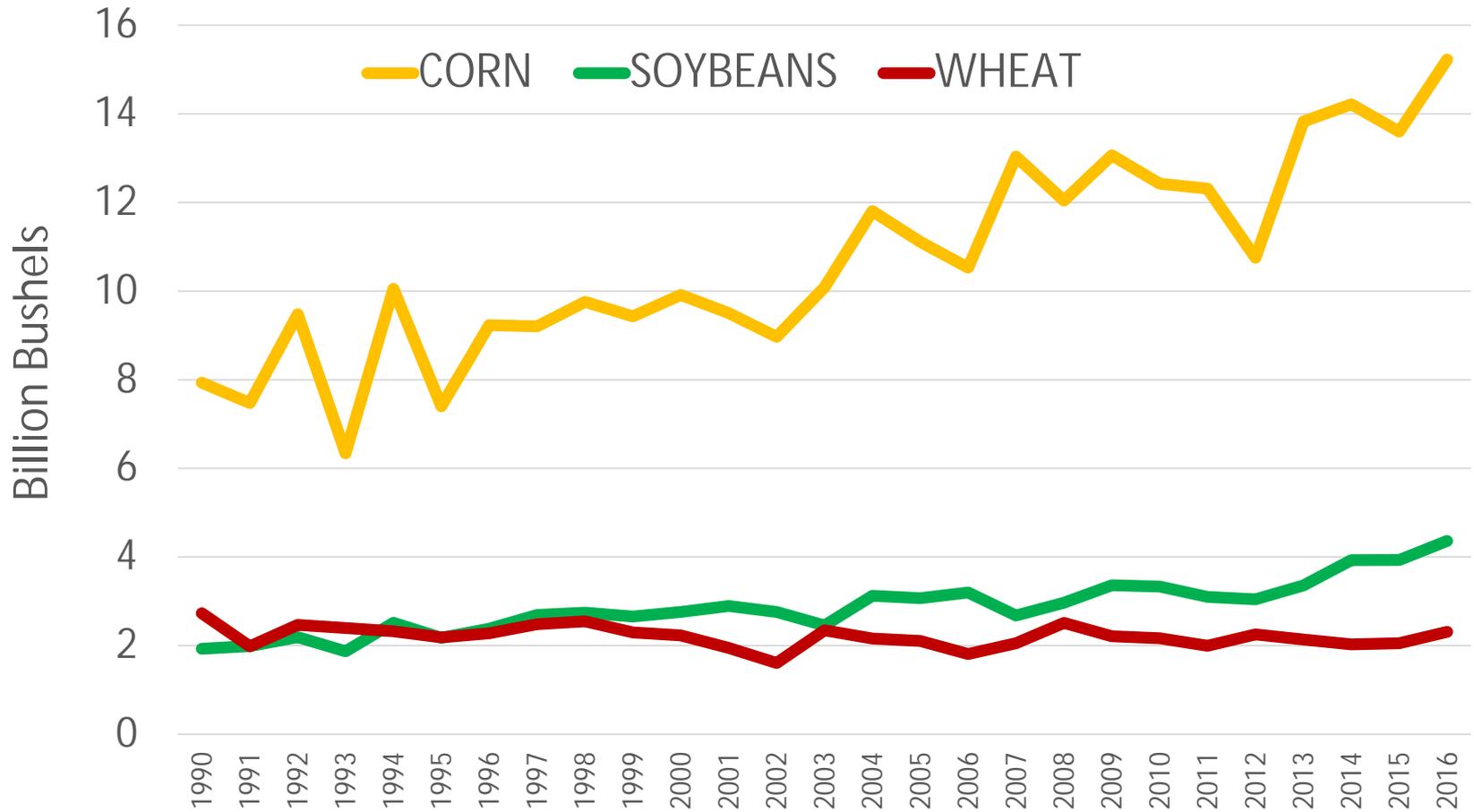
## 2016 SOYBEANS EXPORTS



## 2016 WHEAT EXPORTS



# U.S. Crop Production

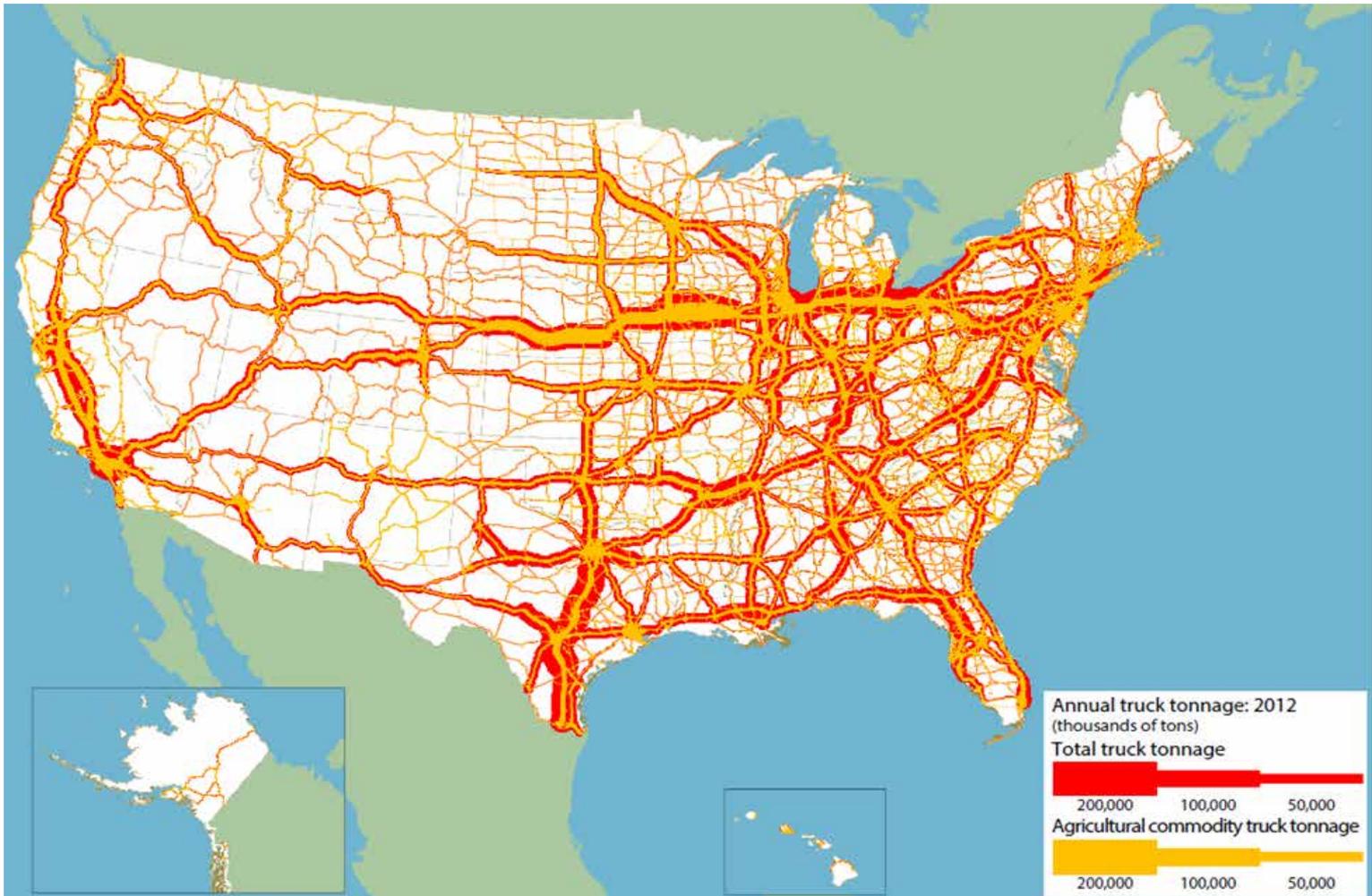


## Modal Share

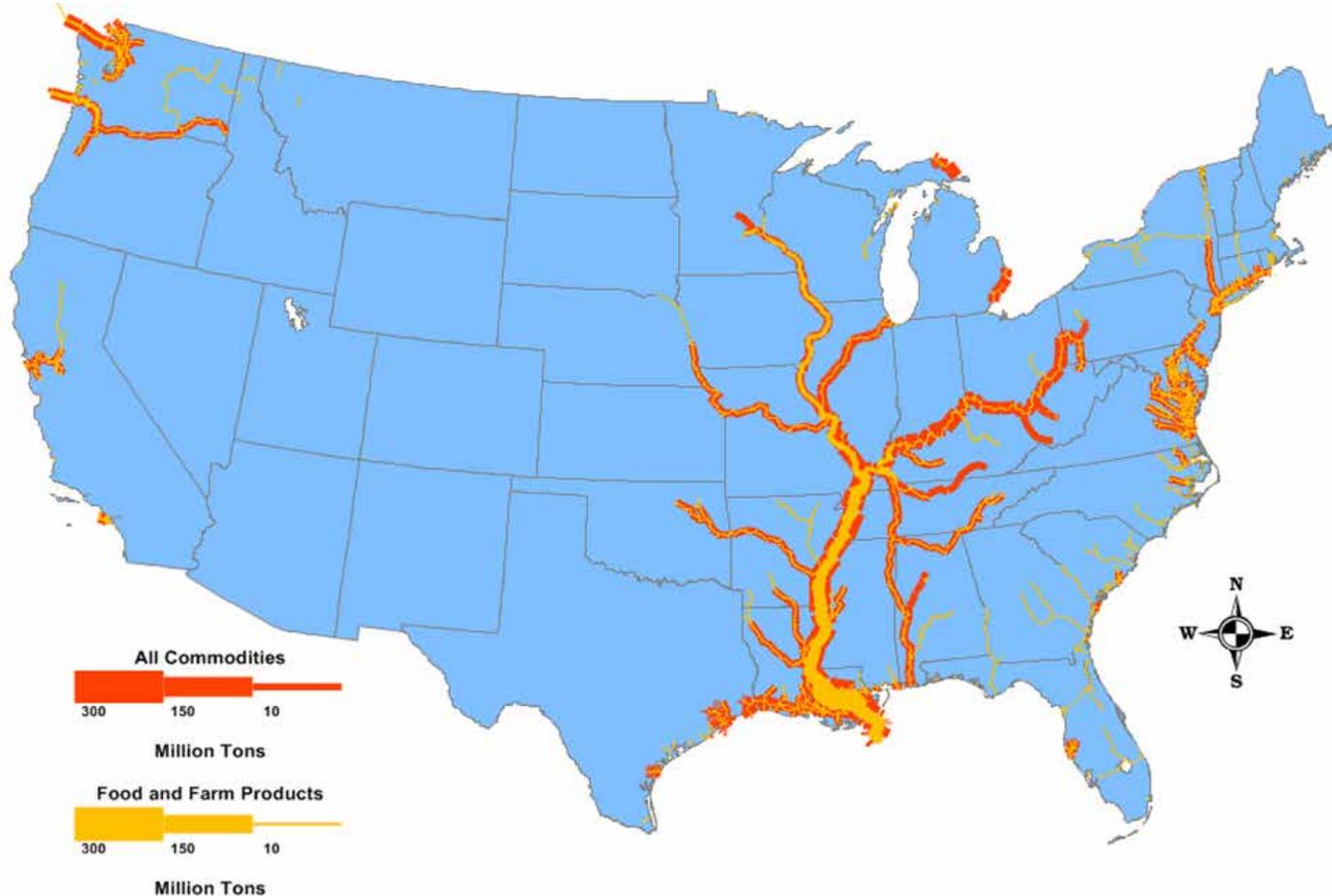
(in percent, 2009-13 average)

<b>Mode</b>	<b>Exports</b>	<b>Domestic</b>	<b>Total</b>
<b>Rail</b>	45	23	29
<b>Barge</b>	45	1	13
<b>Truck</b>	10	76	58

# Truck Flows: Agriculture vs. Total Freight



# Barge Flows: Agriculture vs. Total Freight



# Rail Flows: Agriculture vs. Total Freight



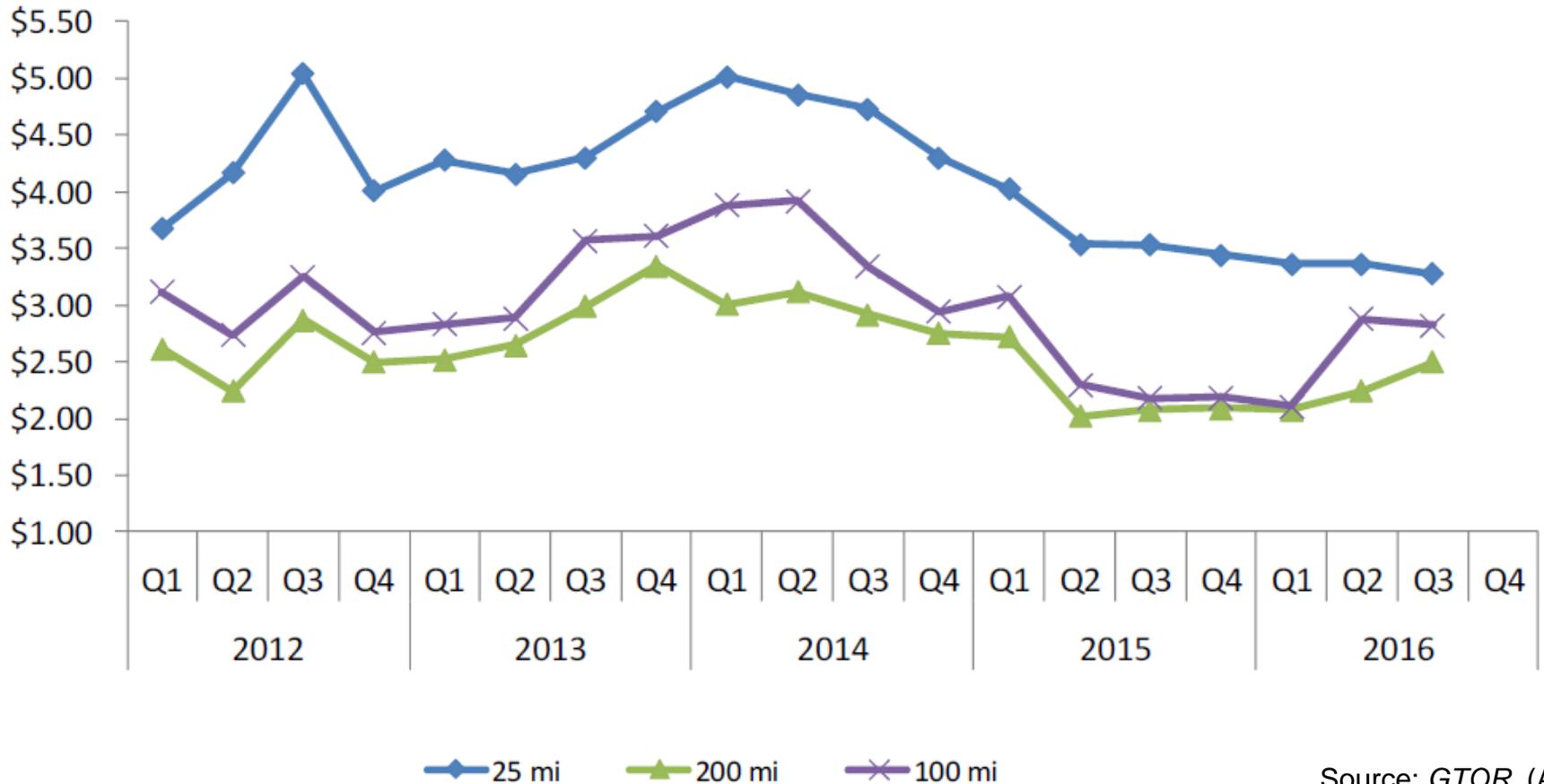
Source: U.S. Department of Transportation. The map uses data from the 2013 Carload Waybill Sample.

## Trucking & Agriculture

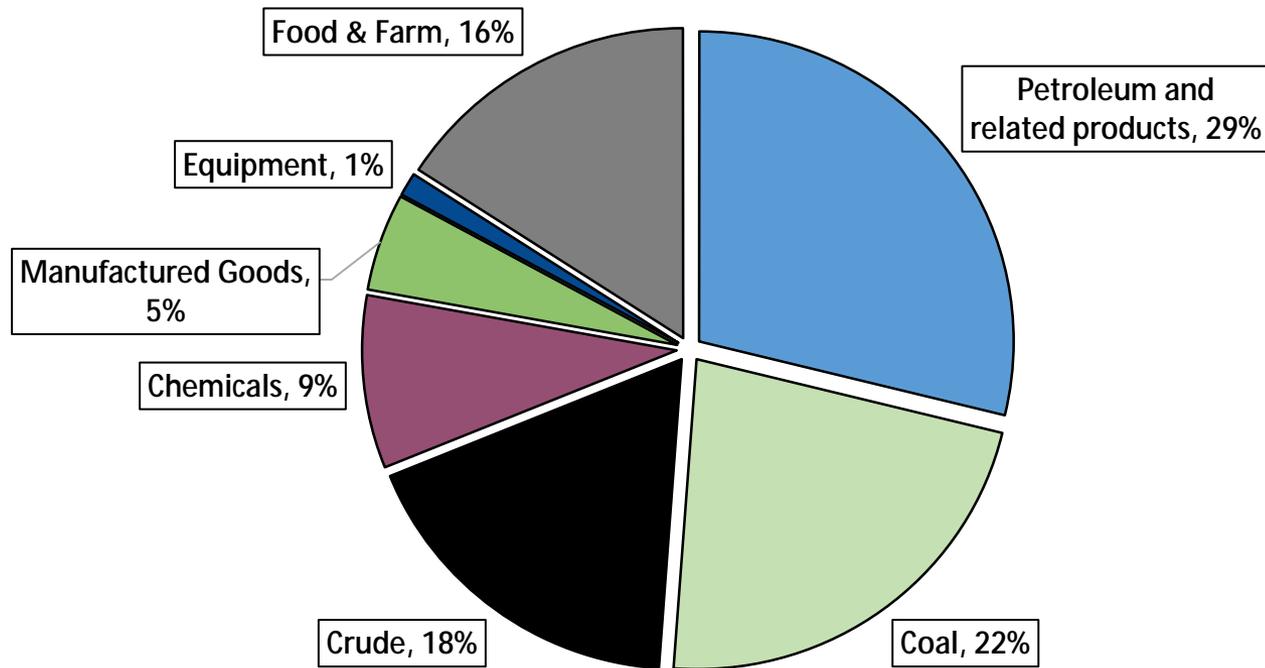
- Trucks carry about 75% of the tonnage of agricultural, food, forest, alcohols, and fertilizer products
- The flexibility trucking offers is important to agriculture (planting and harvest seasons)
- Shipment distances have increased with consolidation of railroads, farms, and facilities
- FAST Act:
  - Provides \$6.3 billion over 5 years for States to invest in freight projects on the national highway freight network
  - Establishes National Highway Freight Program

# Grain Truck Rates (\$/mile per truckload)

3rd Quarter 2016 % Change from:	25 mi.	100 mi.	200 mi
Last Quarter	-2.4	-2.1	11.6
Last Year	-7.1	29.4	20.2

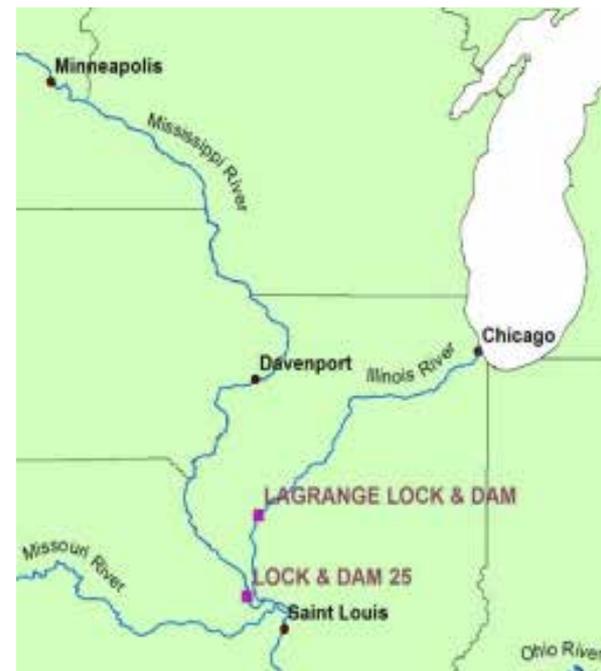


# Barge Tonnage by Commodity Group

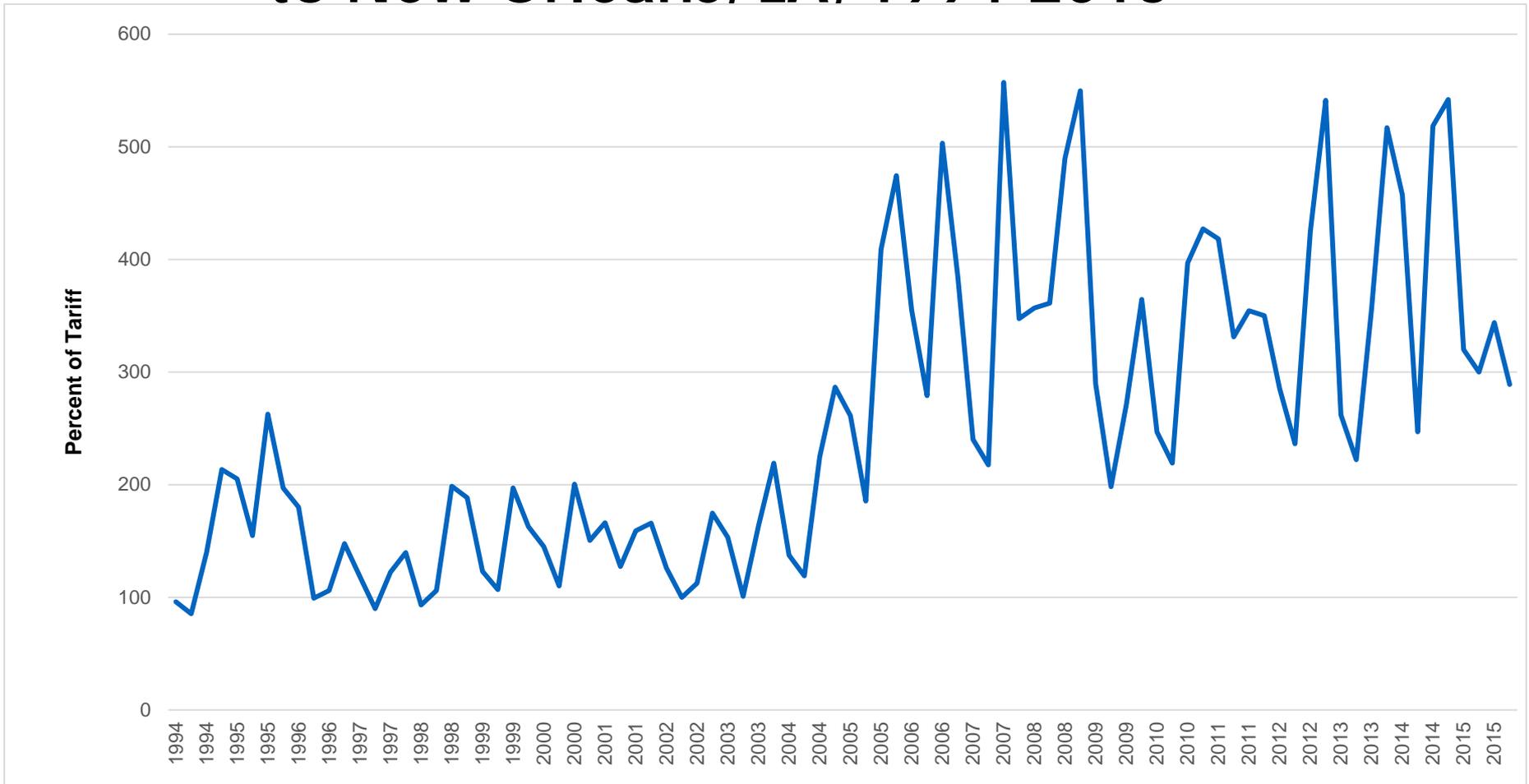


# Lock Closures Study

- Examined separately the potential impact of 2 lock closures (Miss L&D 25 and La Grange Lock)
- Lock closures would:
  - Reduce economic activity, jobs, and labor income
  - Depress corn and soybean prices in adjacent States
  - Shift exports from the Gulf to PNW
  - Increase rail rates



# Quarterly spot barge rates from St. Louis, MO, to New Orleans, LA, 1994-2015



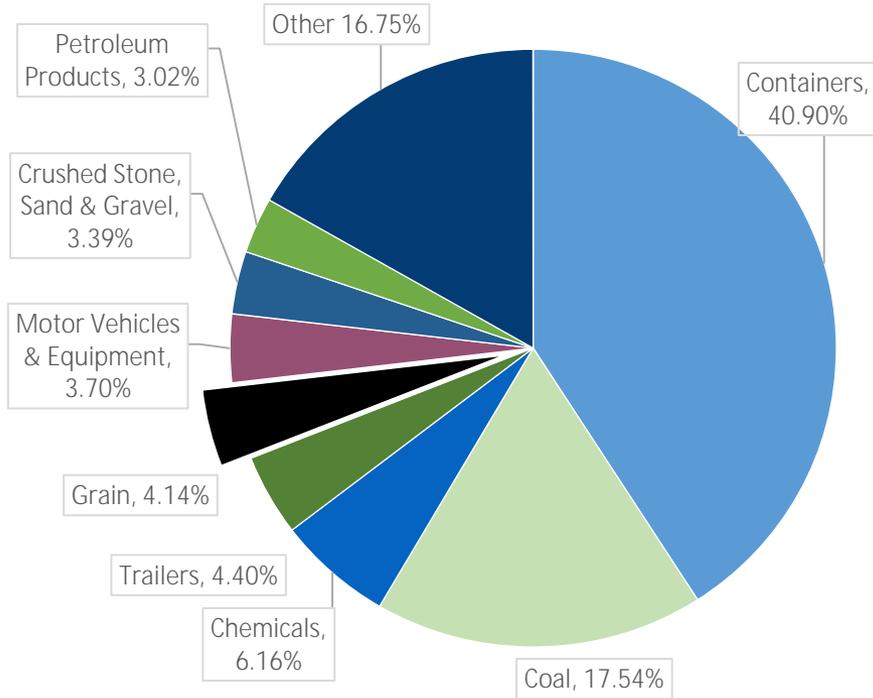
Source: USDA-AMS-TMP-TSD

# Importance of Rail for U.S. Agriculture

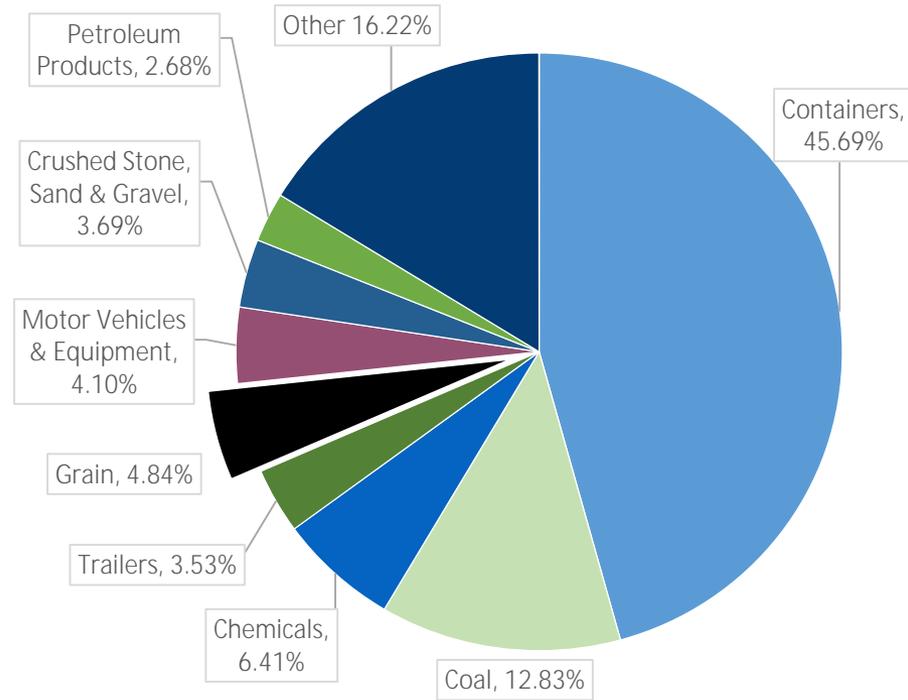
- Railroads move about 29% of all U.S. grain and 45% of export grain movements
- Ag shippers are concerned with many issues, such as:
  - Service
  - High rates
  - Switching limitations/restricted interchange
  - Effectiveness of the rate challenge process
- Record investments by rail - \$28 billion in 2014 and \$30 billion in 2015

# Rail Commodity Shares

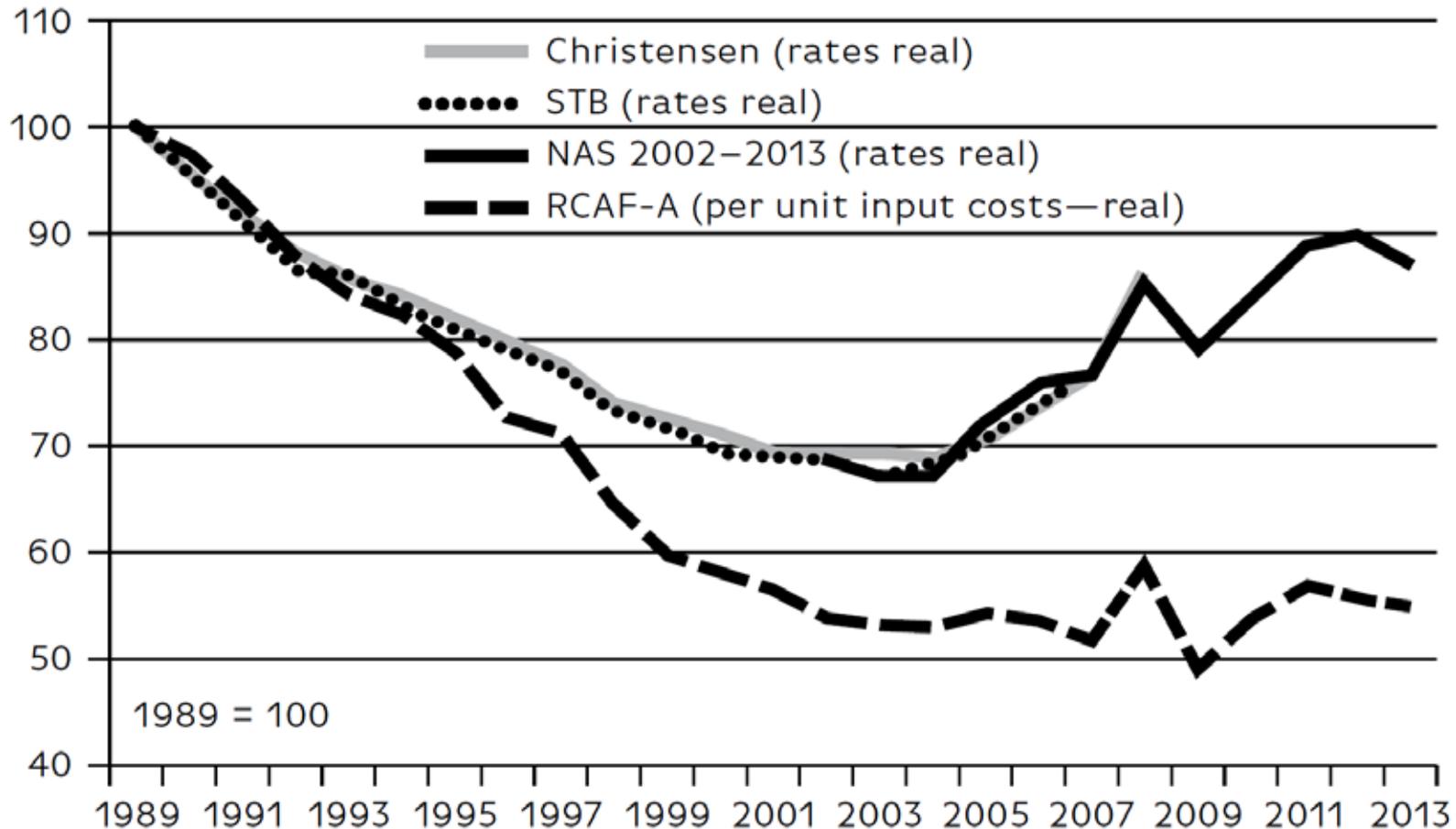
## 2013



## 2016



# Trends in real rail rates and input costs, 1989-2013



Source: Transportation Research Board, *Modernizing Freight Rail Regulation*, 2015.

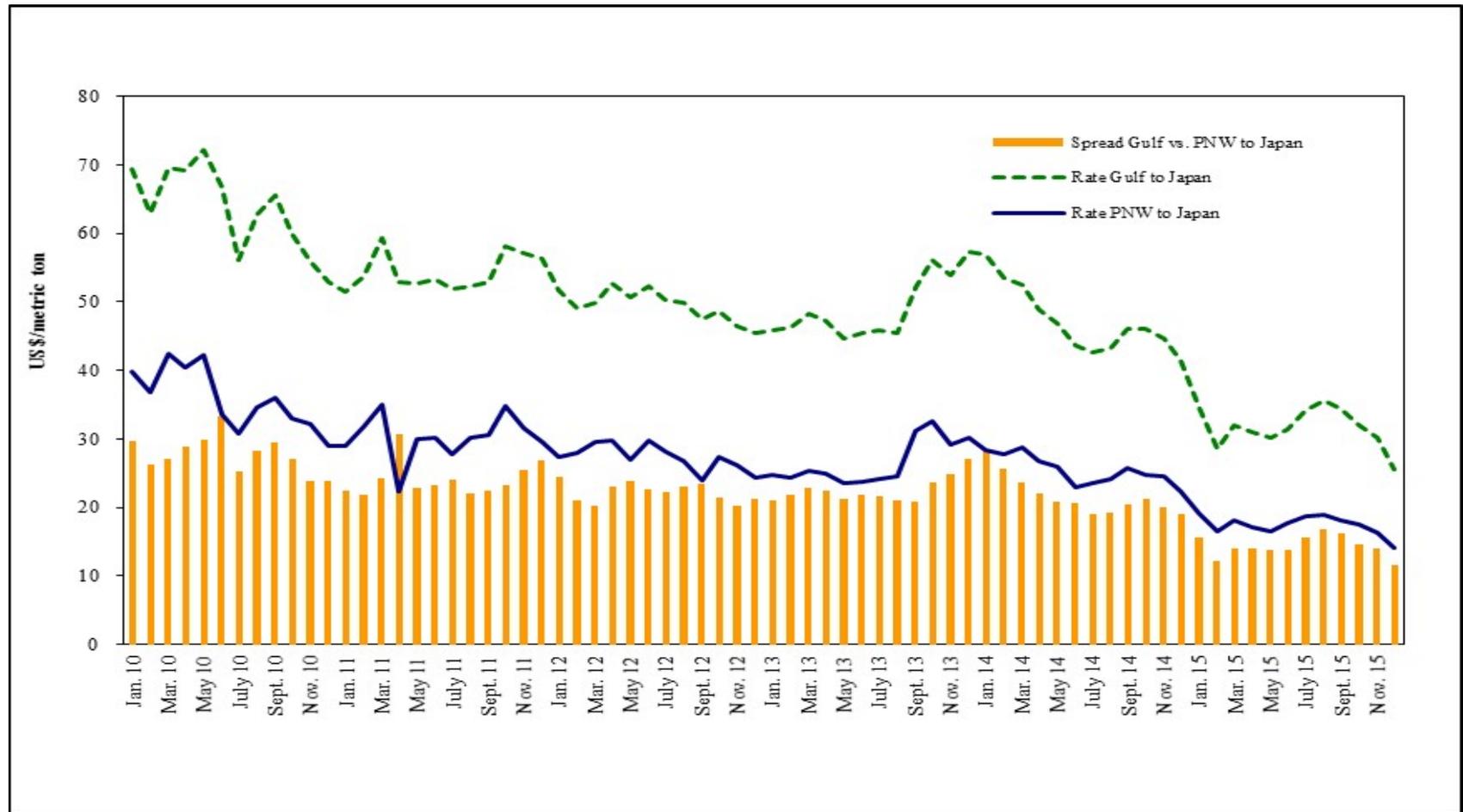
# Ocean Shipping

- About 75% of U.S. ag exports are shipped by ocean (28% in containers)
- The Gulf and Pacific Northwest are major ports for U.S. grains
- About 7% of U.S. grain exports are in containers
- Container Ships - Increasing ship size, carrier alliances and consolidation
- Container and bulk vessel market characterized by low rates and over-capacity

# Ocean Shipping Issues

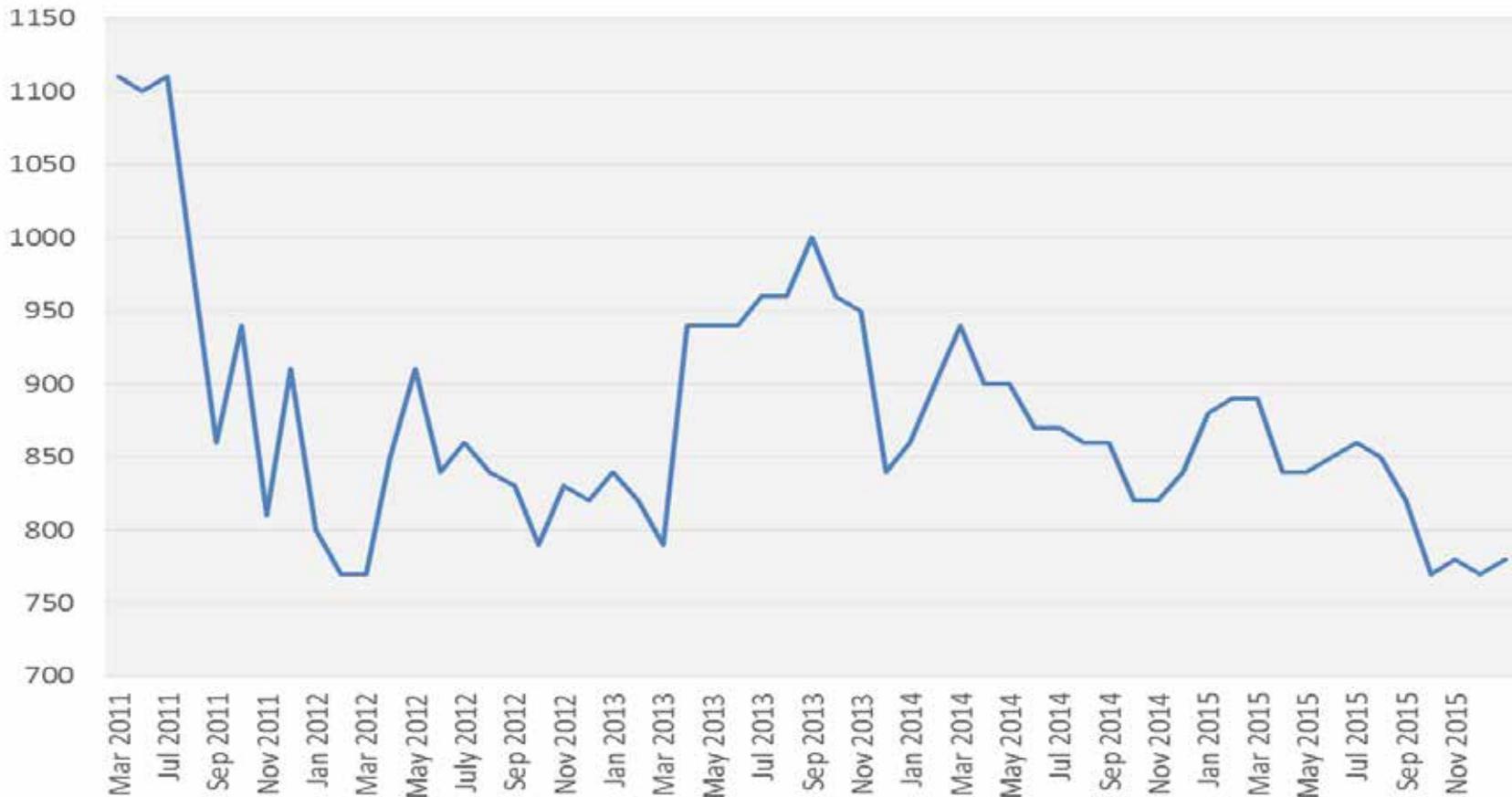
- Federal Maritime Commission report (July 2015):
  - Port congestion increasing with larger vessels
  - Investment needed for ports
  - Chassis management needs improvement
  - Driver turn times need improvement; independent contractor or employee classification in dispute
- DOT annual port performance freight statistics report on top 25 ports.
- Upcoming labor negotiations on all coasts 2016-2019

# Ocean freight rates for bulk grain from U.S. to Japan



Source: Baltic Exchange, Inc. / Drewry Shipping Consultants Ltd  
<[www.drewry.co.uk](http://www.drewry.co.uk)>/O'Neil Commodity Consulting

# Container freight rates for U.S. West Coast (LA) to Shanghai, China



Source: Drewry Maritime Research

## Wrap-Up / Conclusions

- TSD is a resource on ag transportation (data and research)
- Freight transportation is important to U.S. agriculture's competitiveness
- Agriculture is a major user of the U.S. transportation system, relying on multiple modes
- Agricultural freight in U.S. is increasing
- Agriculture needs workable solutions (e.g., reasonable rates, access, reduced port congestion and ship size issues)

## Contact Information

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