ILLINOIS SOYBEAN ASSOCIATION

PRODUCING RESULTS

Agricultural Trade:
Export Markets and Biofuels

Scott Sigman
Transportation and Export Infrastructure Lead

March 13, 2013

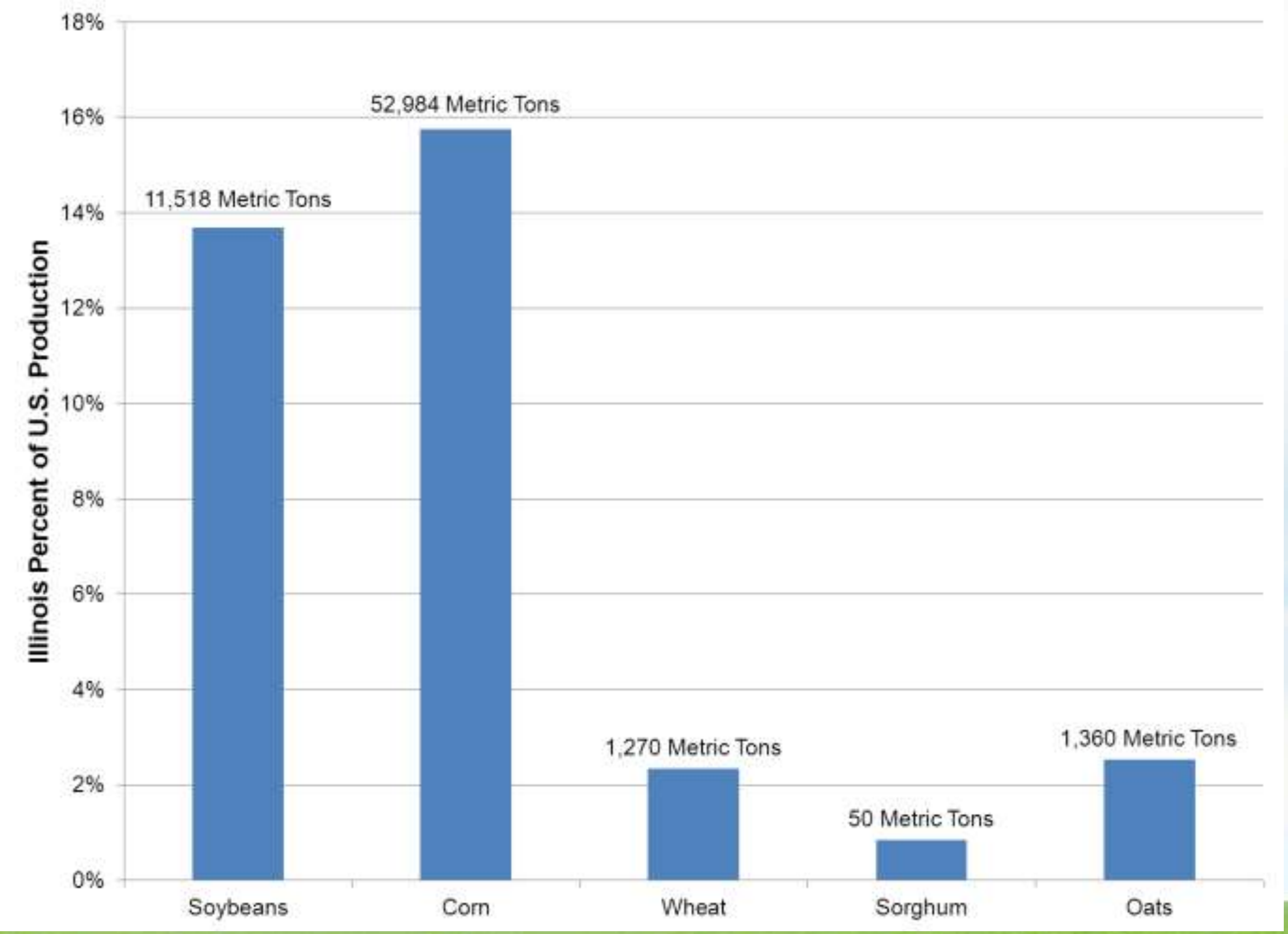
Funded in part by the **Illinois** soybean checkoff.

Introduction to Illinois Soybean Association

- Who IL Soy is
  - Representing over 45,000 growers across the state
- What IL Soy does
  - Ensuring Illinois Soy is the highest quality, most dependable sustainable and competitive in the global marketplace.
- How IL Soy is helping foster trade
  - Transportation
  - Market Access

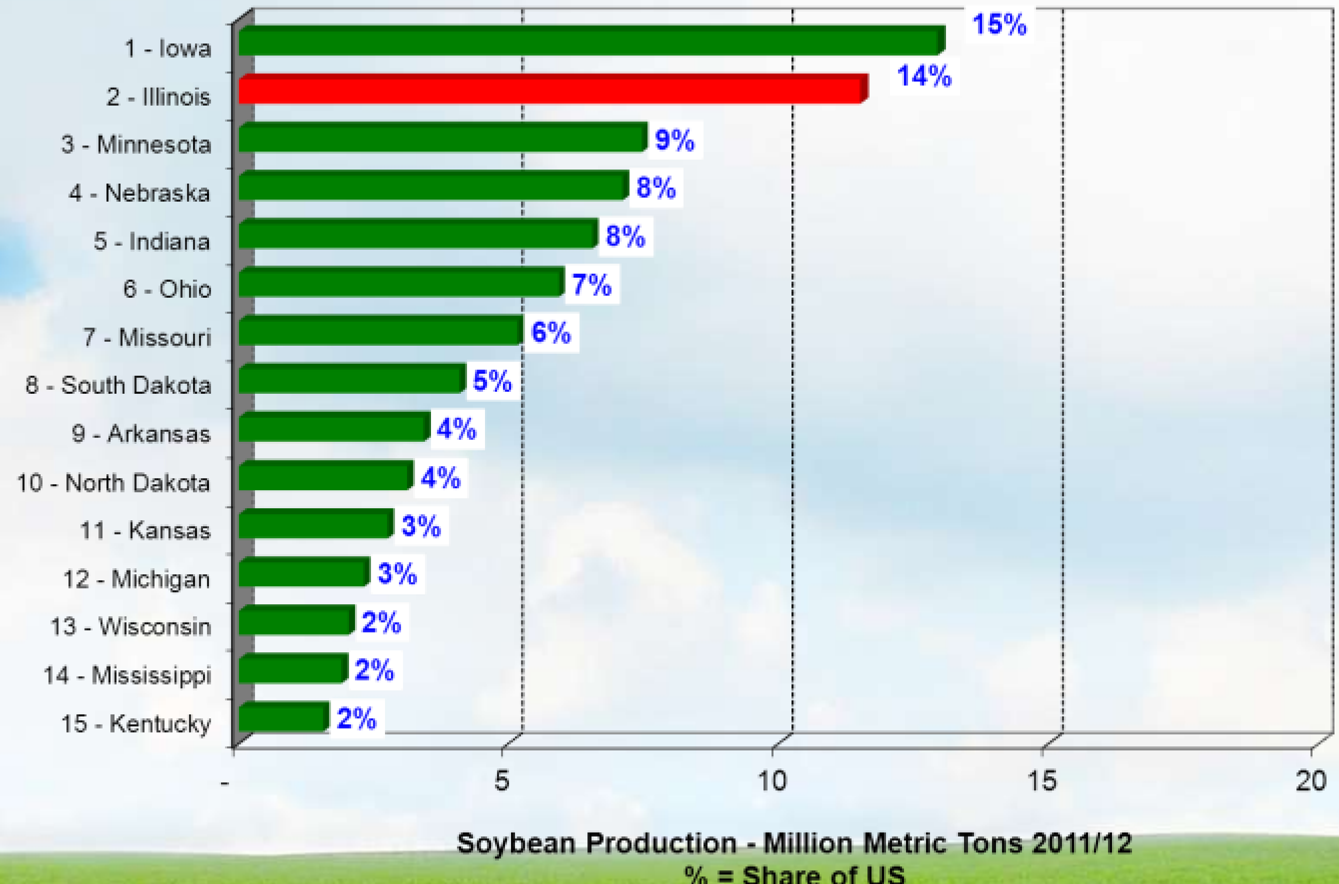
Illinois's Position in U.S. Agriculture and Soybean Production

Illinois Percent of U.S. Crop Production



Source: USDA and Informa Economics

Illinois Accounts for 14% of U.S. Soybean Production



Source: USDA and Informa Economics

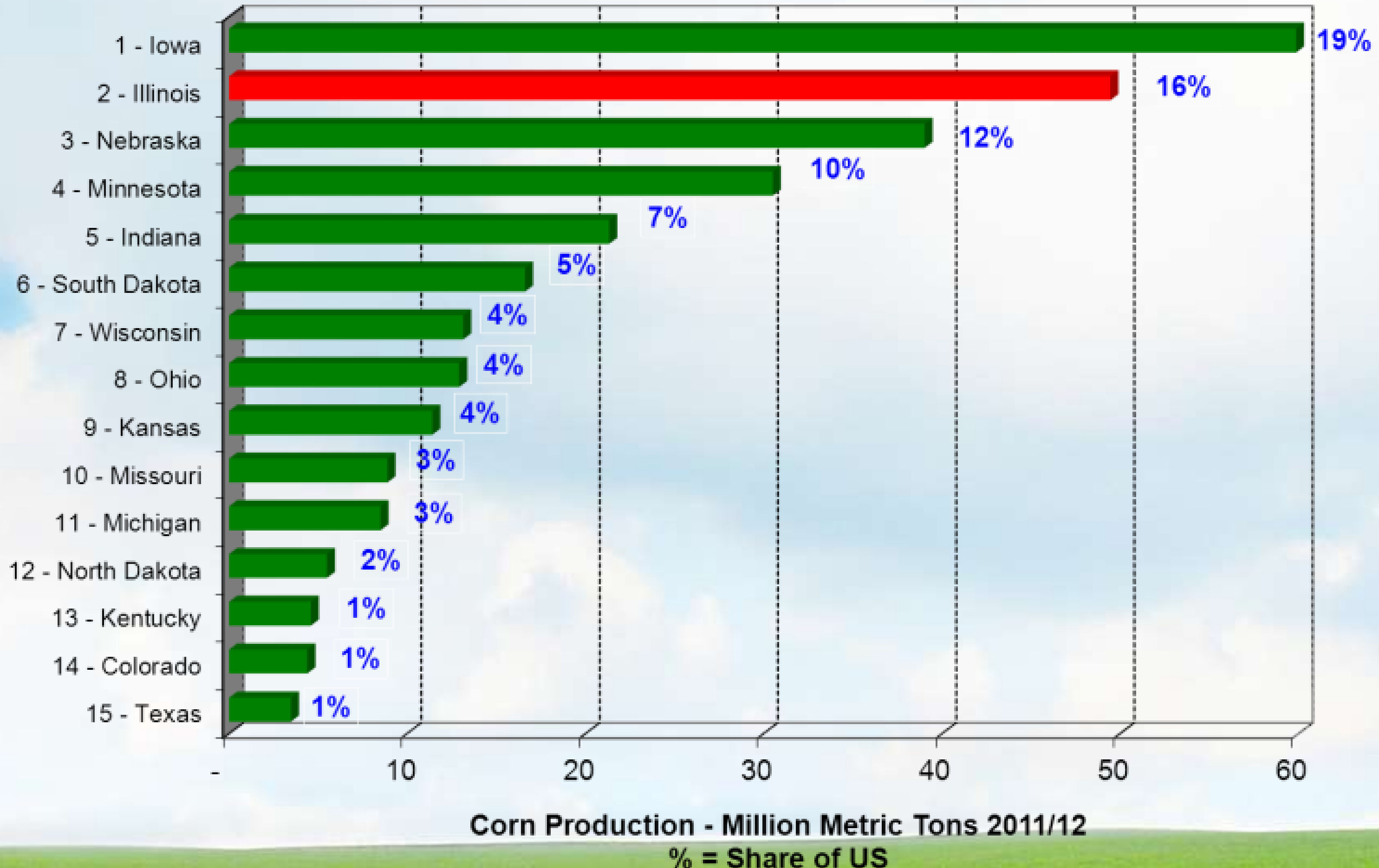
Soybean Processing - Crush Capacity

State (by Alpha)	Percentage
ALABAMA	3.8%
ARKANSAS	3.7%
GEORGIA	3.5%
IOWA	20.0%
ILLINOIS	17.6%
INDIANA	10.2%
KANSAS	4.3%
KENTUCKY	2.2%
LOUISANA	1.6%
MARYLAND	1.4%
MINNESOTA	5.6%
MISSOURI	5.2%
MISSISSIPPI	3.4%
NORTH CAROLINA	4.3%
NEBRASKA	3.1%
OHIO	5.3%
SOUTH CAROLINA	1.4%
TENNESSEE	1.8%
VIRGINIA	1.4%

State (by Rank)	Percentage
IOWA	20.00%
ILLINOIS	17.60%
INDIANA	10.20%
MINNESOTA	5.60%
OHIO	5.30%
MISSOURI	5.20%
NORTH CAROLINA	4.30%
KANSAS	4.30%
ALABAMA	3.80%
ARKANSAS	3.70%
GEORGIA	3.50%
MISSISSIPPI	3.40%
NEBRASKA	3.10%
KENTUCKY	2.20%
TENNESSEE	1.80%
LOUISANA	1.60%
VIRGINIA	1.40%
SOUTH CAROLINA	1.40%
MARYLAND	1.40%

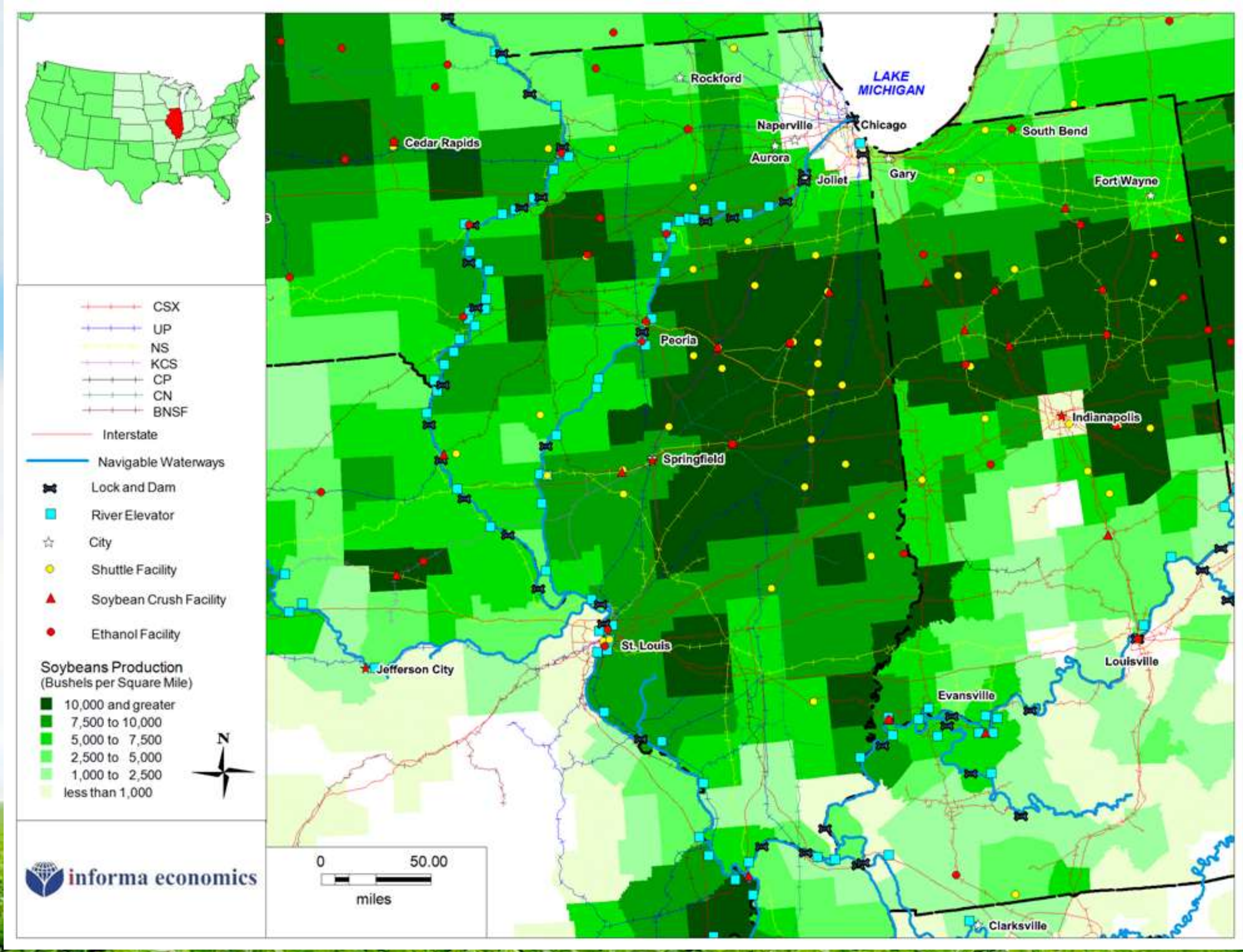
80%

Illinois Accounts for 16% of U.S. Corn Production

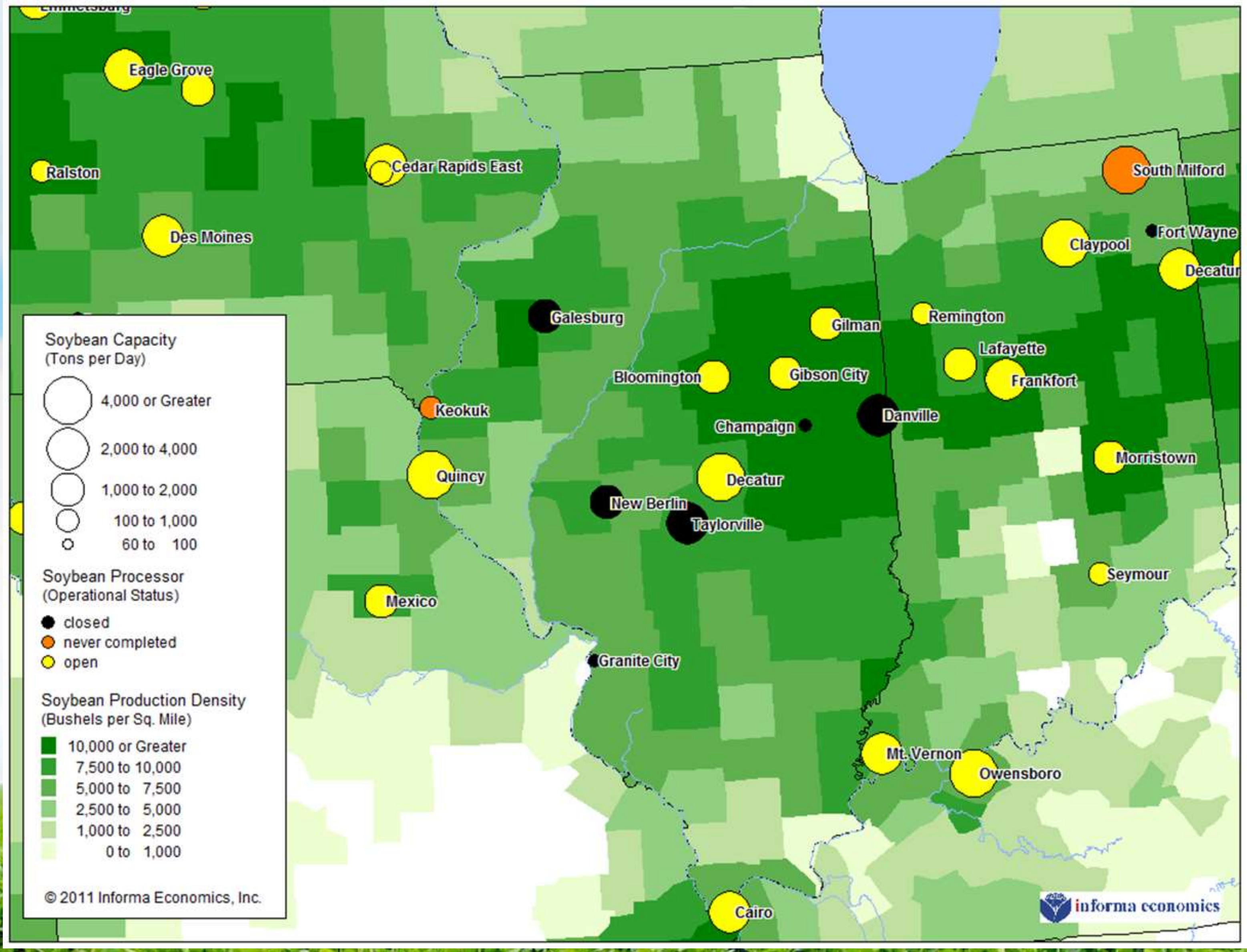


Source: USDA and Informa Economics

Illinois Soybean Infrastructure

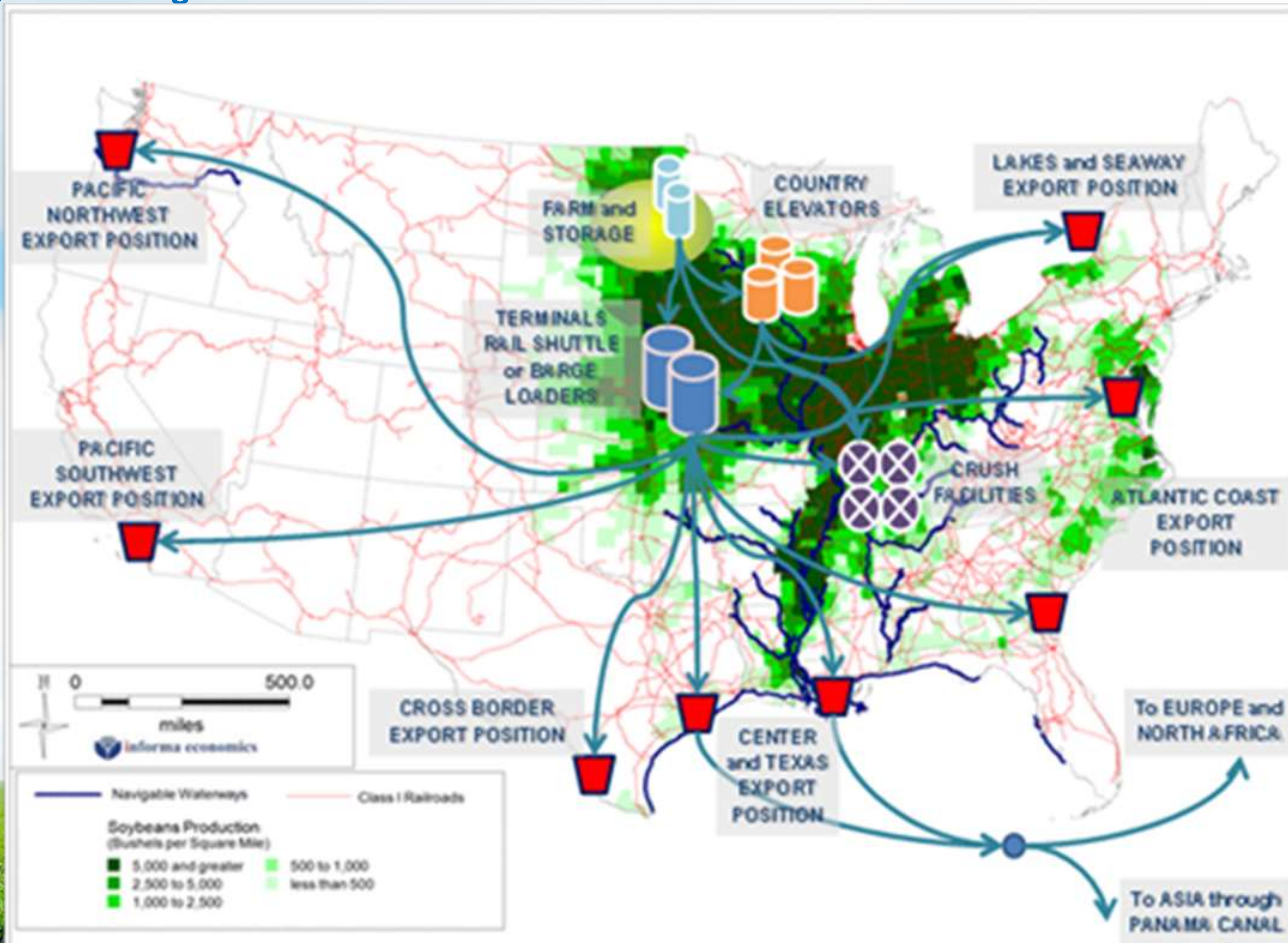


Illinois Soybean Processing Industry



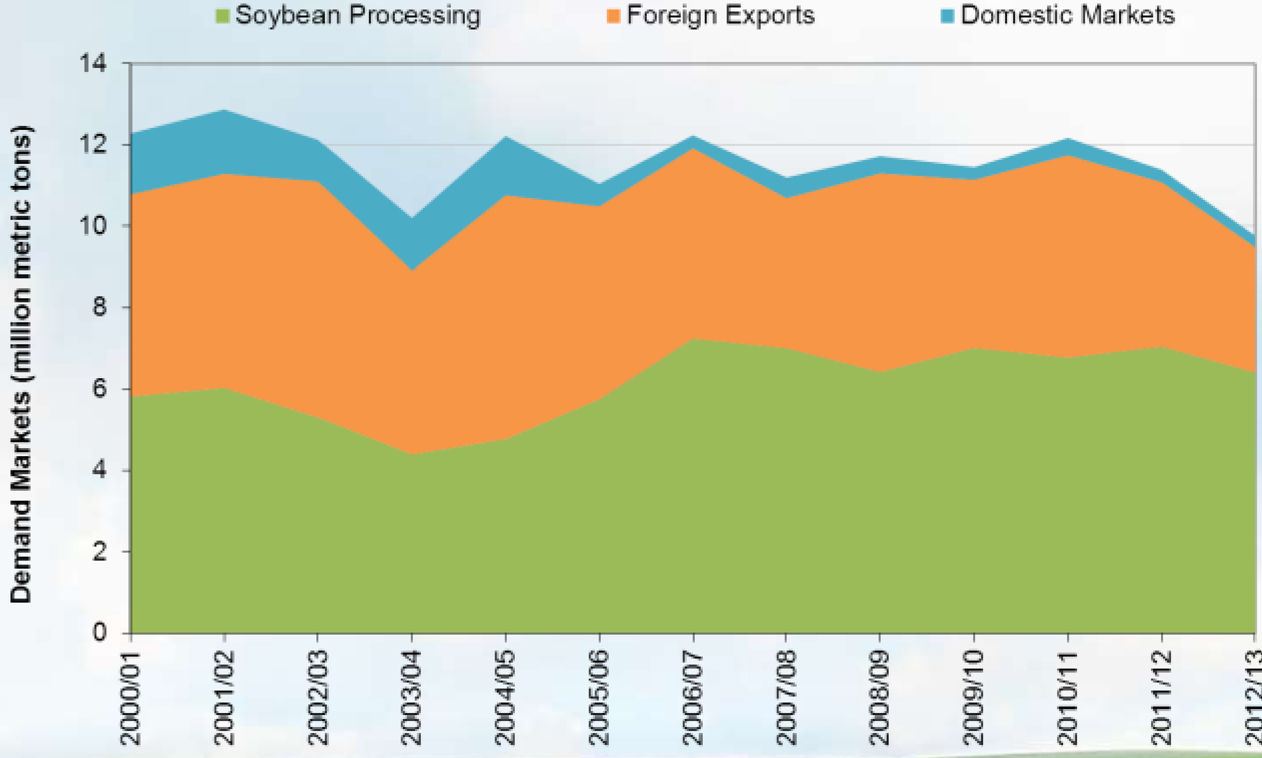
Soybean Logistics Flow

Soybeans originate in the Mid-West and flow to end markets.



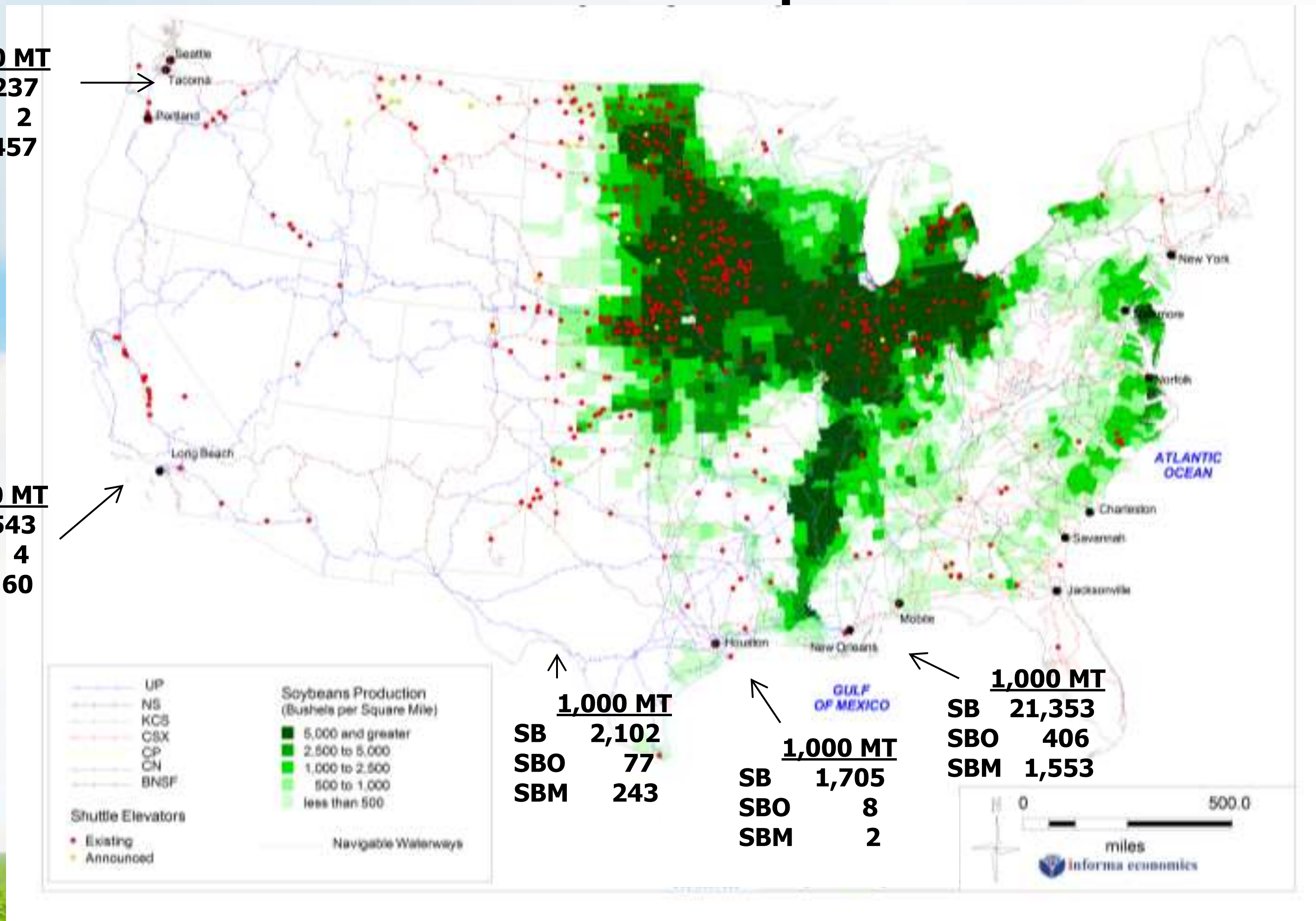
Soybeans as Economic Development

- ***58% of Illinois soybean production was processed in Illinois from 2009/10 through 2011/12.***
- ***37% of Illinois soybean production was exported out of the U.S. during the same period.***



Source: USDA, Informa Economics

US Soybean, Soybean Oil and Soybean Meal Exports



1,000 MT	
SB	9,237
SBO	2
SBM	457

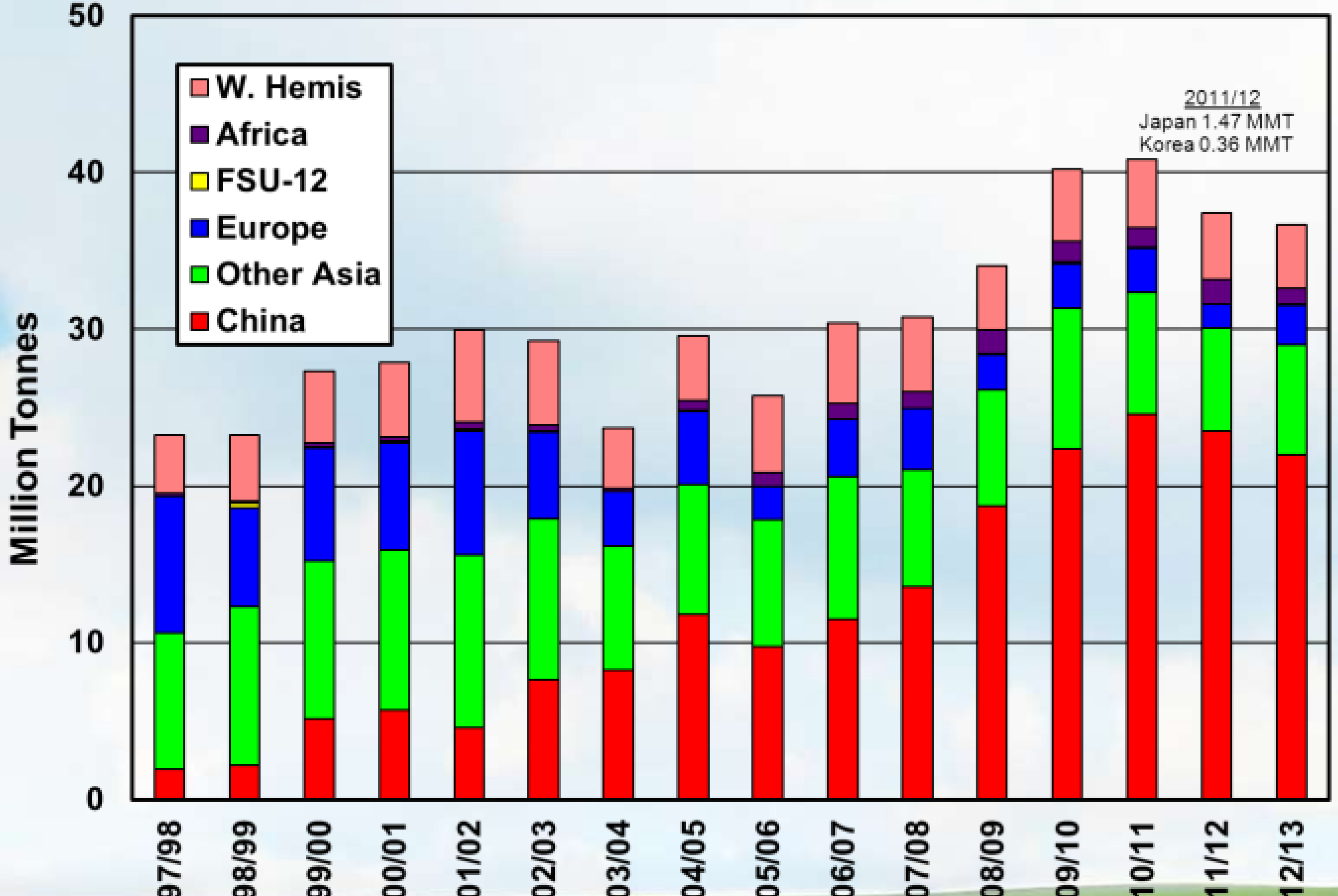
1,000 MT	
SB	1,543
SBO	4
SBM	60

1,000 MT	
SB	2,102
SBO	77
SBM	243

1,000 MT	
SB	1,705
SBO	8
SBM	2

1,000 MT	
SB	21,353
SBO	406
SBM	1,553

U.S. Soybean Exports



Source: USDA and Informa Economics

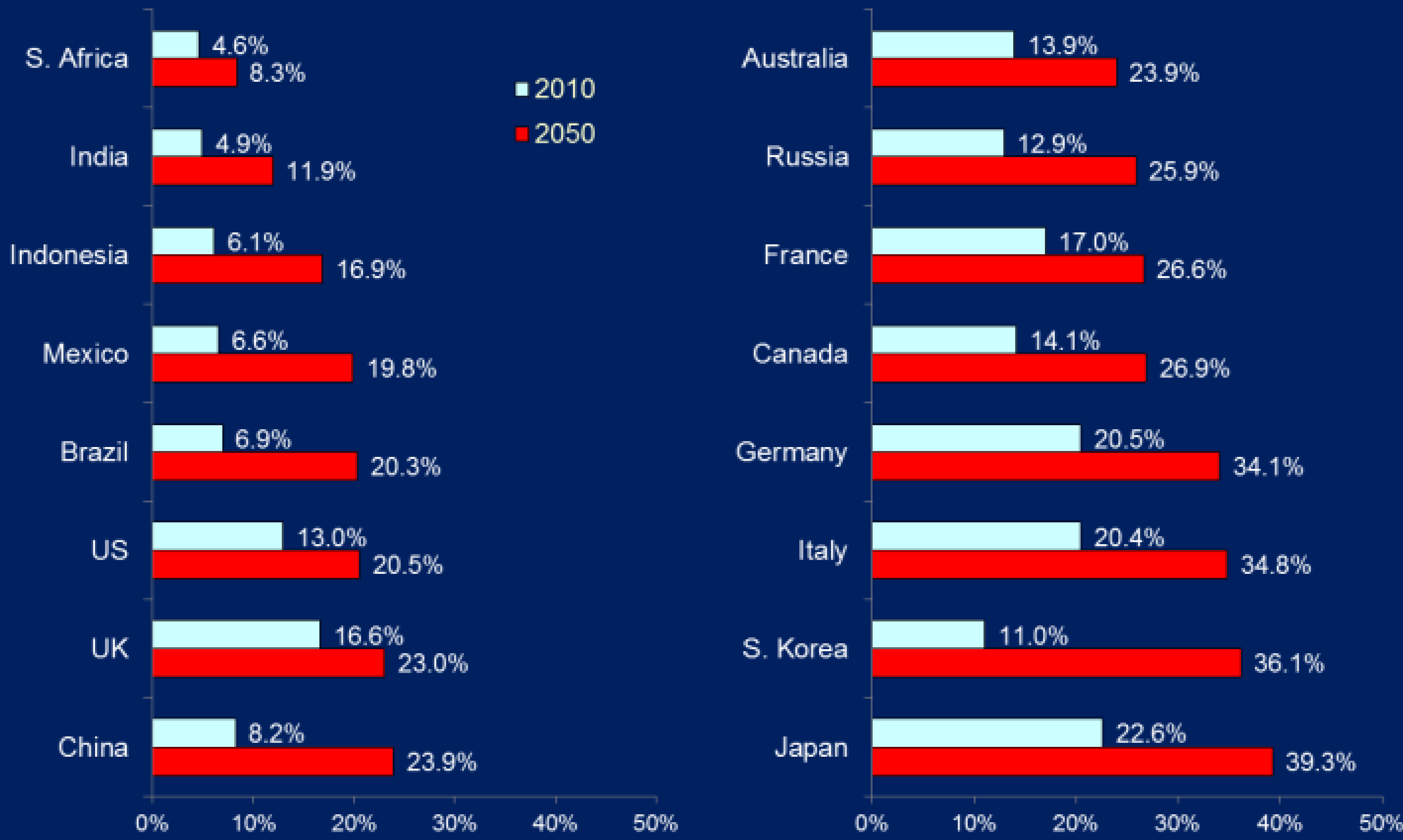
Soybean Exports

Asia is the driving force behind soybean exports.

- China soybean crushers import soybeans to satisfy domestic meal demand and sell the oil onto the domestic market.
- As animal operations in Asia continue to increase in number and become more commercialized, meal consumption increases, which in turn increases oilseed and meal import demand.
- Due to the sheer size of the population in Asia, the Asian commodity demand pull will continue to be a dominating feature in commodity markets. How well the market players adjust to this reality will determine their long-term success.
    - Being able to export commodities using containers is an advantage for many Illinois farmers.
    - With the current world supply and demand situation, it would be shortsighted not to develop all methods to take advantage of the Asian opportunity.

The great challenge of the 21st century is population aging, not population growth.

Elderly (Aged 65 and Over), as a Percent of the Population in 2010 and 2050



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Source: UN (2009)

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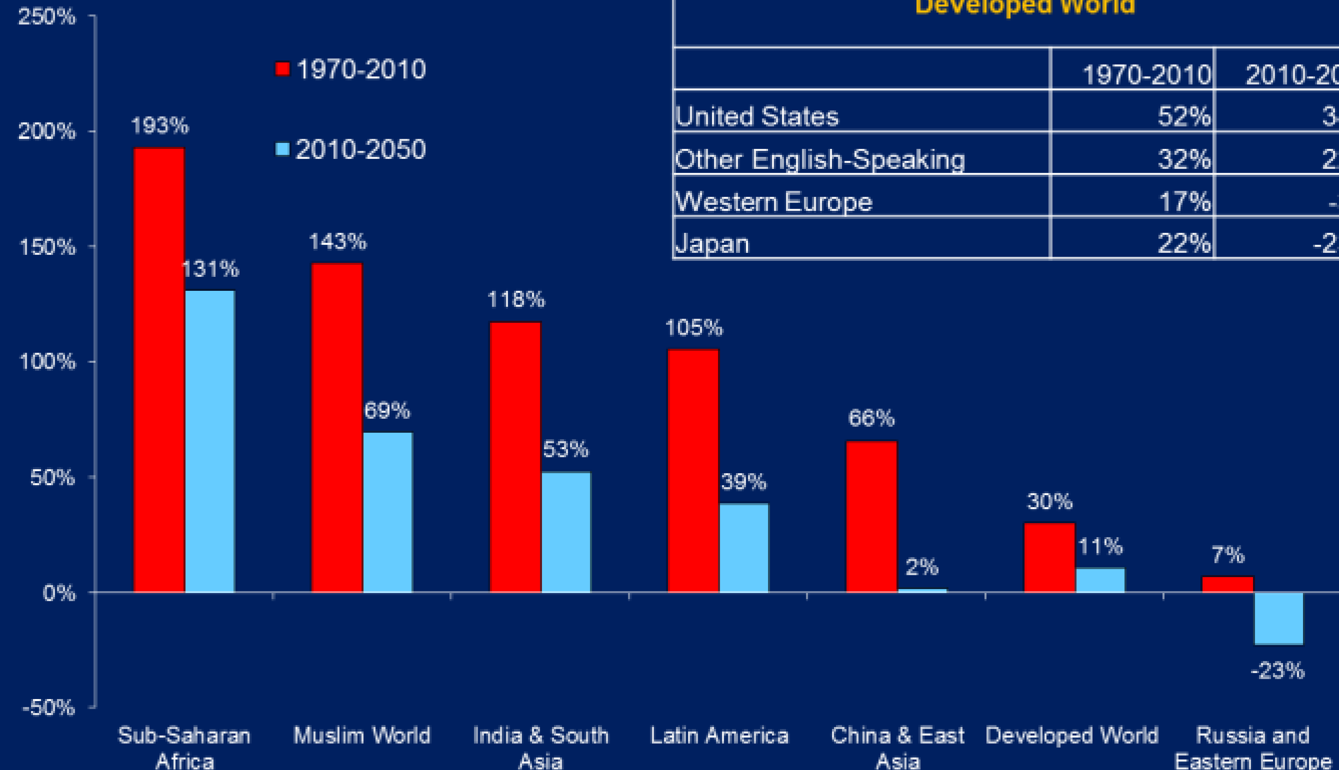
Many countries will not only have aging populations, but stagnant or contracting ones.

Cumulative Population Change, by Period, 1970-2050

Developed World		
	1970-2010	2010-2050
United States	52%	34%
Other English-Speaking	32%	22%
Western Europe	17%	-3%
Japan	22%	-23%



Source: UN (2009)

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The Developed World: A Shrinking Share of Global Population

12 Largest Countries Ranked by Population

Ranking	1950	2010	2050
1	China	China	India
2	India	India	China
3	***US***	***US***	***US***
4	Russian Federation	Indonesia	Pakistan
5	***Japan***	Brazil	Nigeria
6	Indonesia	Pakistan	Indonesia
7	***Germany***	Bangladesh	Bangladesh
8	Brazil	Nigeria	Brazil
9	***UK***	Russian Federation	Ethiopia
10	***Italy***	***Japan***	Philippines
11	Bangladesh	Mexico	Dem. Rep. Congo
12	***France***	Philippines	Egypt
		Germany (16)	Russian Federation (16)
		France (21)	***Japan*** (19)
		UK (22)	***UK*** (27)
		Italy (23)	***France*** (29)
			Germany (30)
			Italy (37)

Source: UN (2009)
Note: Rankings for developed countries that have fallen below 12 are in parentheses.

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Illinois Agricultural and Food Processing Industry

ILLINOIS Agricultural Infrastructure: Crush, Ethanol Facilities, Livestock Processing, and Grain Storage			
Facility Type	**# of Facilities**	**Capacity**	
Soybean Crushers	6	22,456	MT/Day
Ethanol Facility* (operating)	14	1,346	MGY
Federally Inspected Livestock Slaughter/Processing Facilities	253	n/a	
State Inspected Livestock Slaughter/Processing Facilities	161	n/a	
Grain Elevators	667	969,956	Thous. Bu. Storage
Shuttle Elevators	40	177,051	Thous. Bu. Storage
River Elevators**	65	95,455	Thous. Bu. Storage

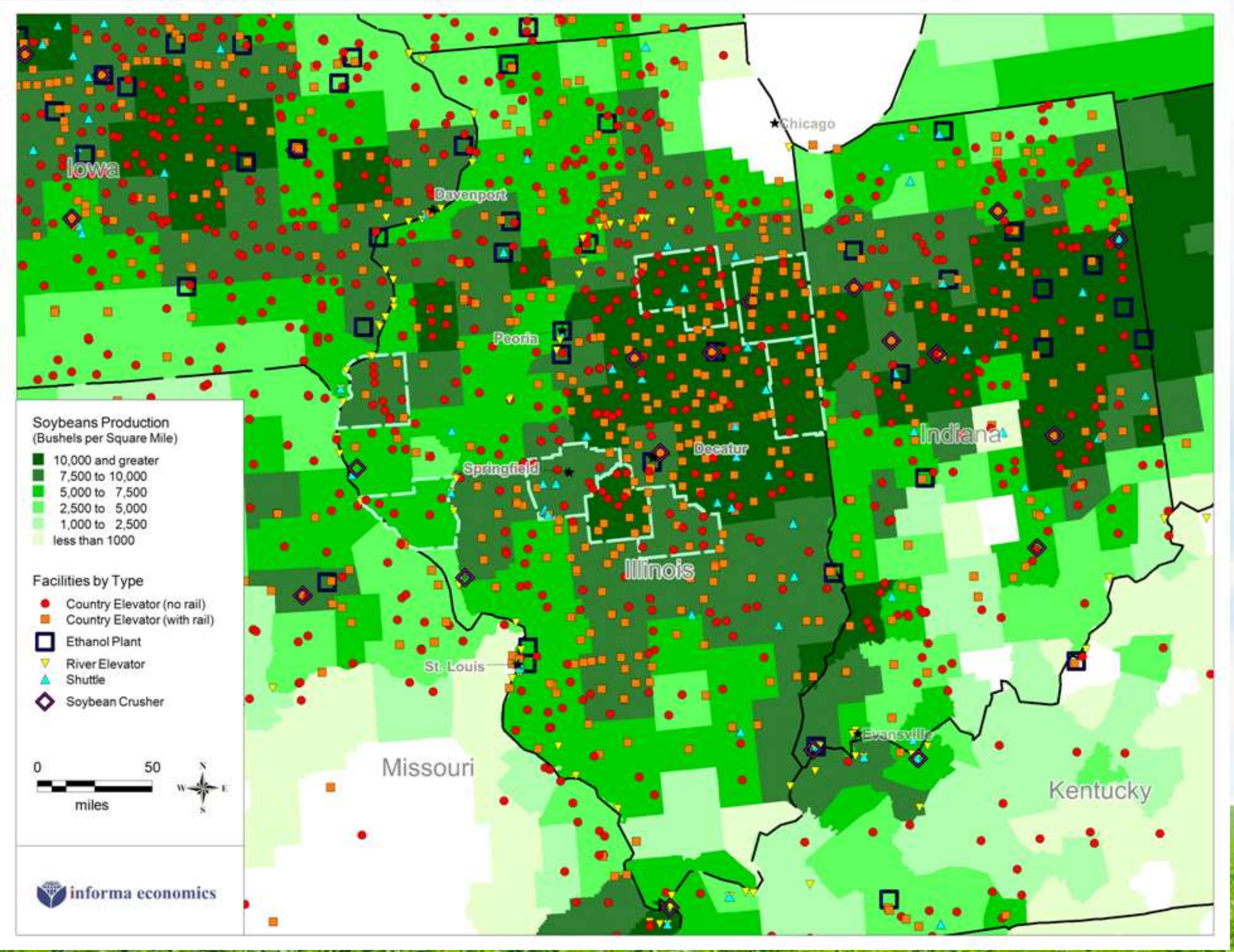
** Cellulosic ethanol facilities are included in ethanol facility database.*

*** Missing river elevator capacity at 1 IL location*

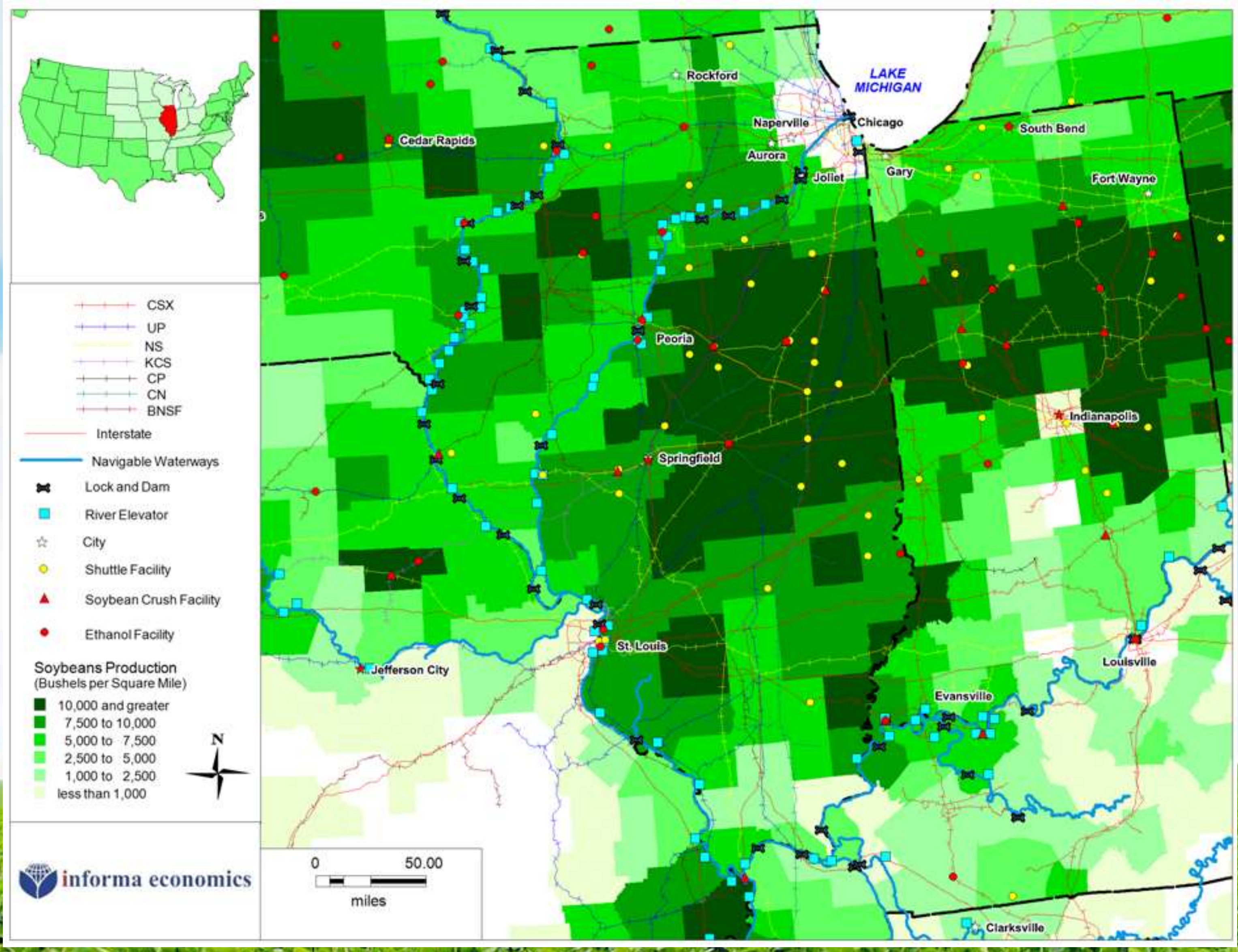
Companies Located in Illinois

ADM
BUNGE
Cargill®
Clarkson Grain Company, Inc.
CGB ENTERPRISES, INC®
GAVILON
INCOBRASA
JOHN DEERE
Aventine® RENEWABLE ENERGY
The Andersons
ABENGOA
Nestlé Good Food, Good Life
John Morrell
ARMOUR
ECKRICH Since 1894
DARLING INTERNATIONAL INC.
JBS united
TATE & LYLE
Del Monte Quality
Kraft

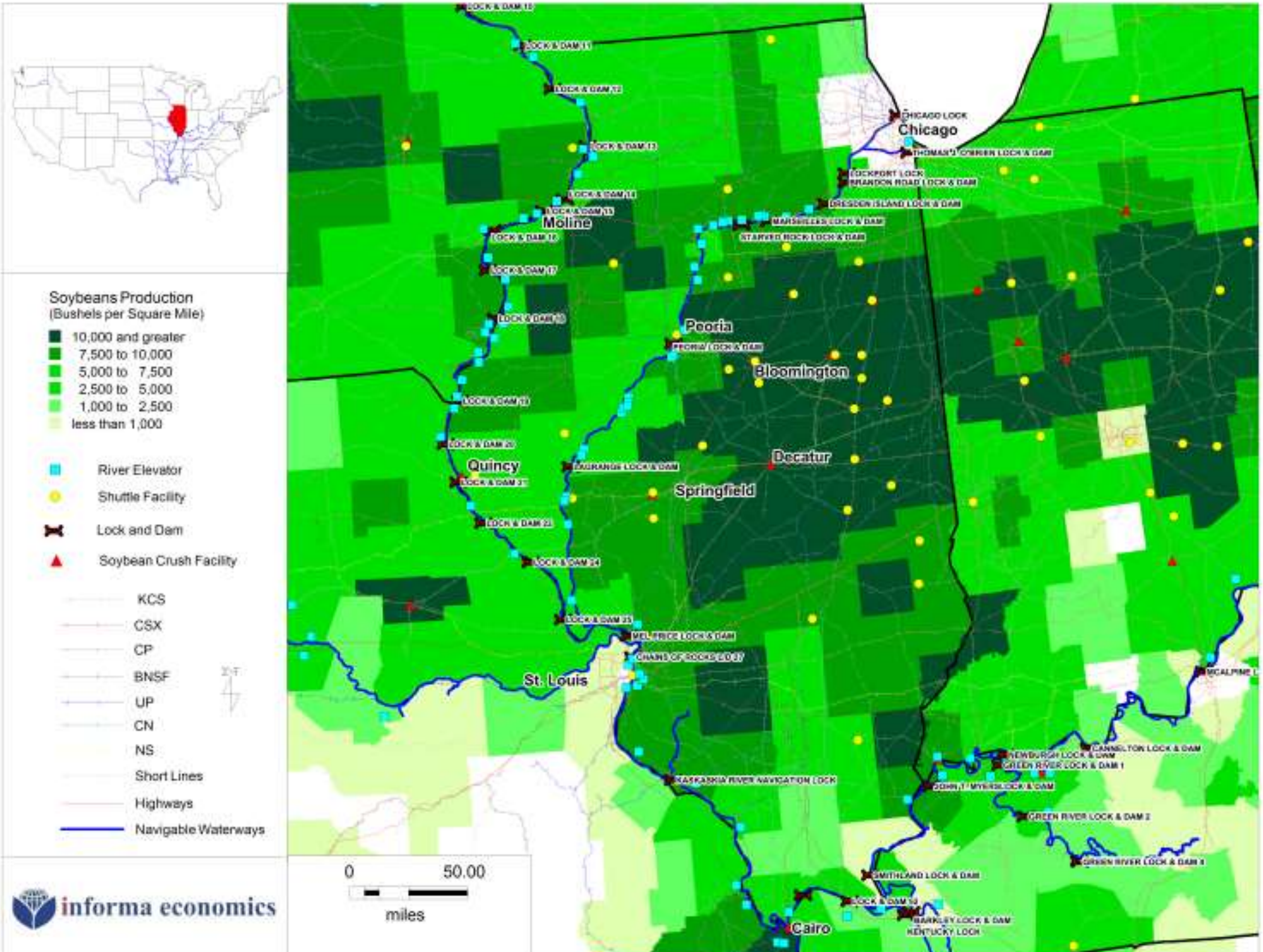
Illinois Elevator Network



Illinois Grain Logistics Network



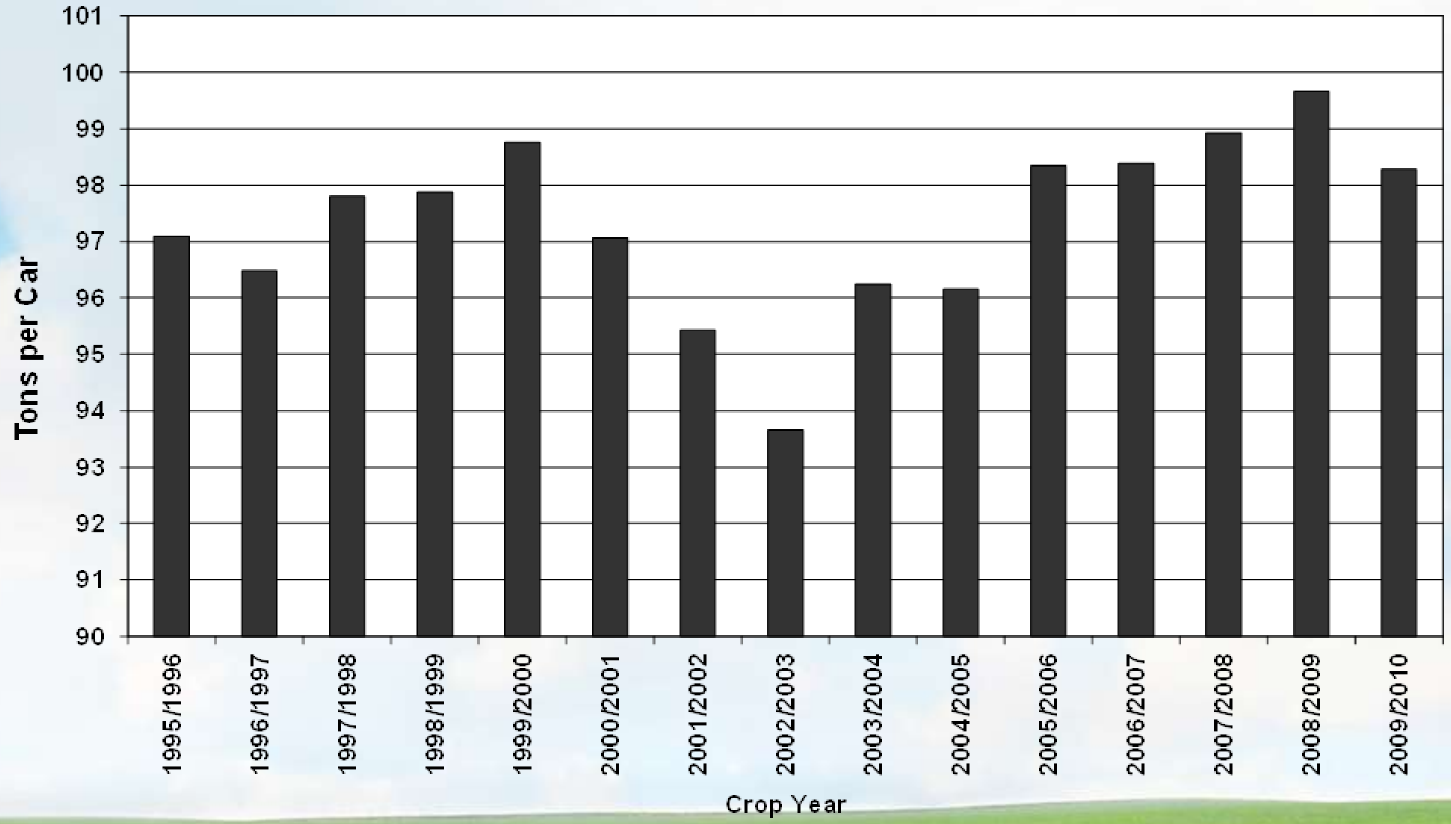
Illinois River Network



Illinois Rail Network

Average Rail Soybean Tons per Railcar in and around Illinois

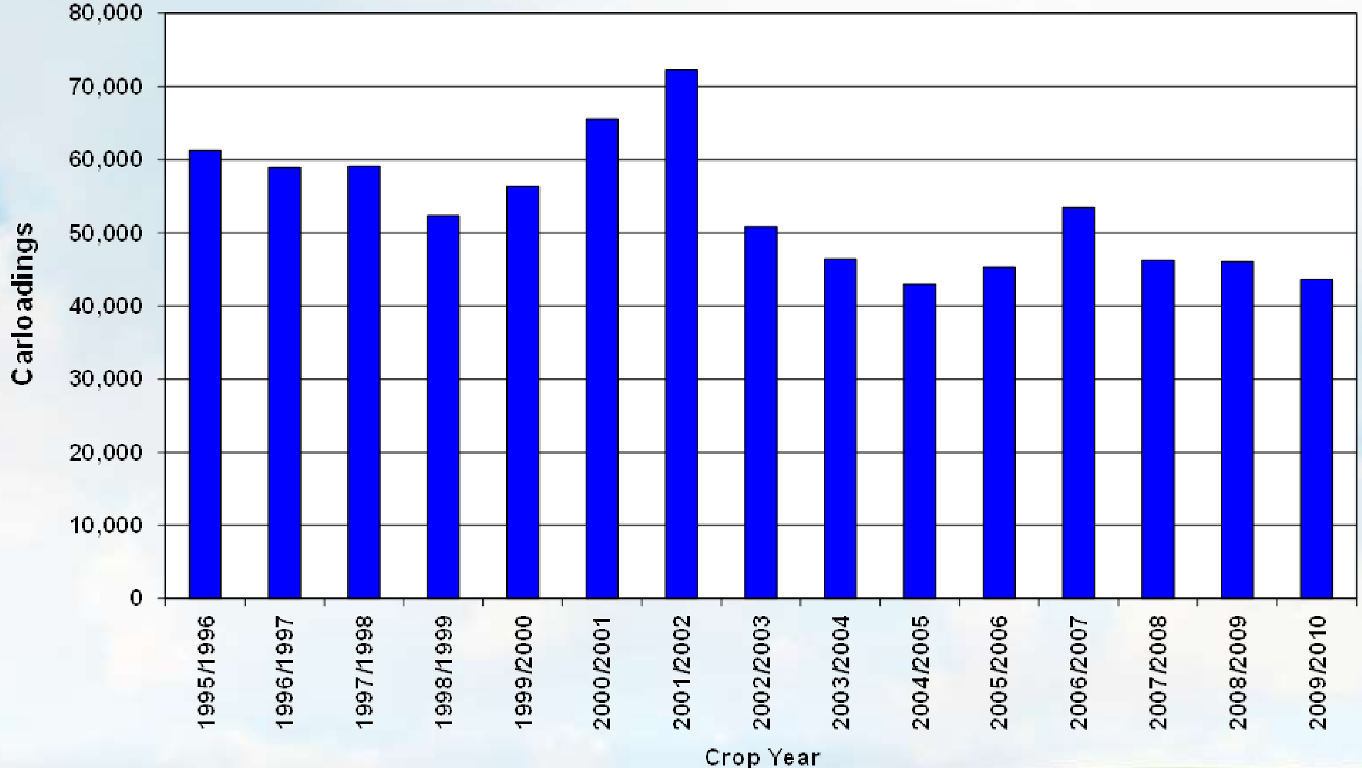
Older, smaller railcars are being retired and replaced with larger capacity railcars.



Source: Public Use Waybill and Informa Economics

Total Soybean Carloadings in and around Illinois

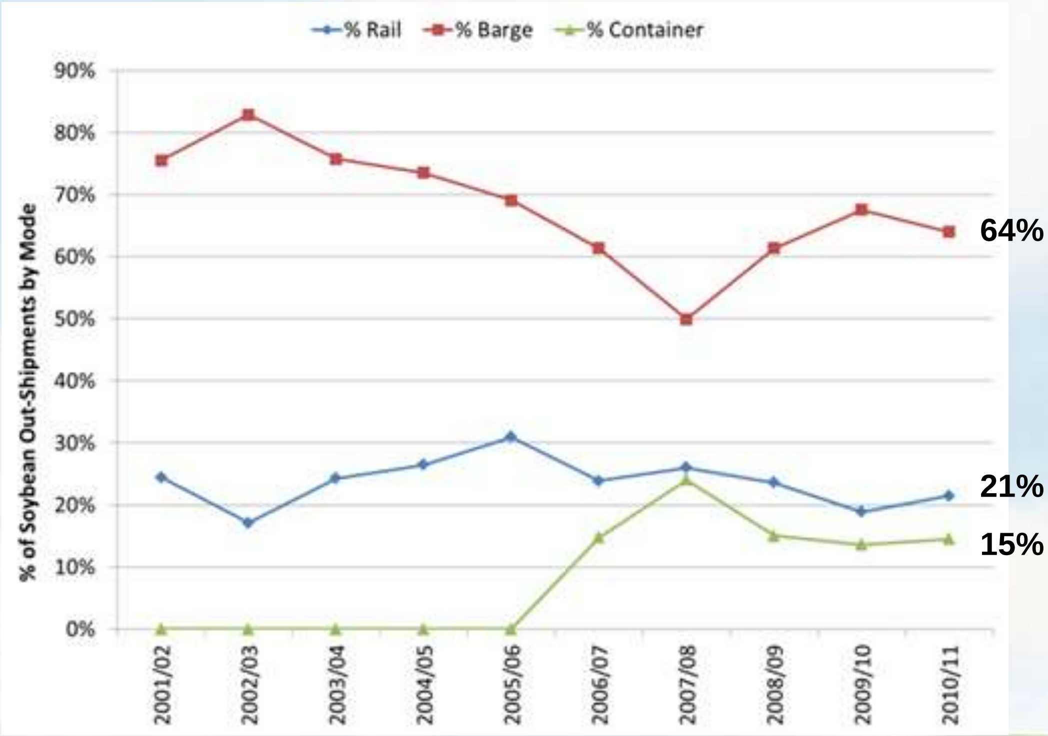
Carloadings have remained constant as smaller railcars are replaced with larger railcars allowing for the same or larger volume with fewer railcars.



Source: Public Use Waybill and Informa Economics

Percent of Soybean Out-Shipments by Mode from Illinois

Container is expected to capture an increasing share of total soybean out-shipments, and while total volume of soybeans move out by rail, and barge moves are expected to increase, their shares are expected to decline at the expense of the increasing container movements.



Source: US Waybill Data Informa Economics

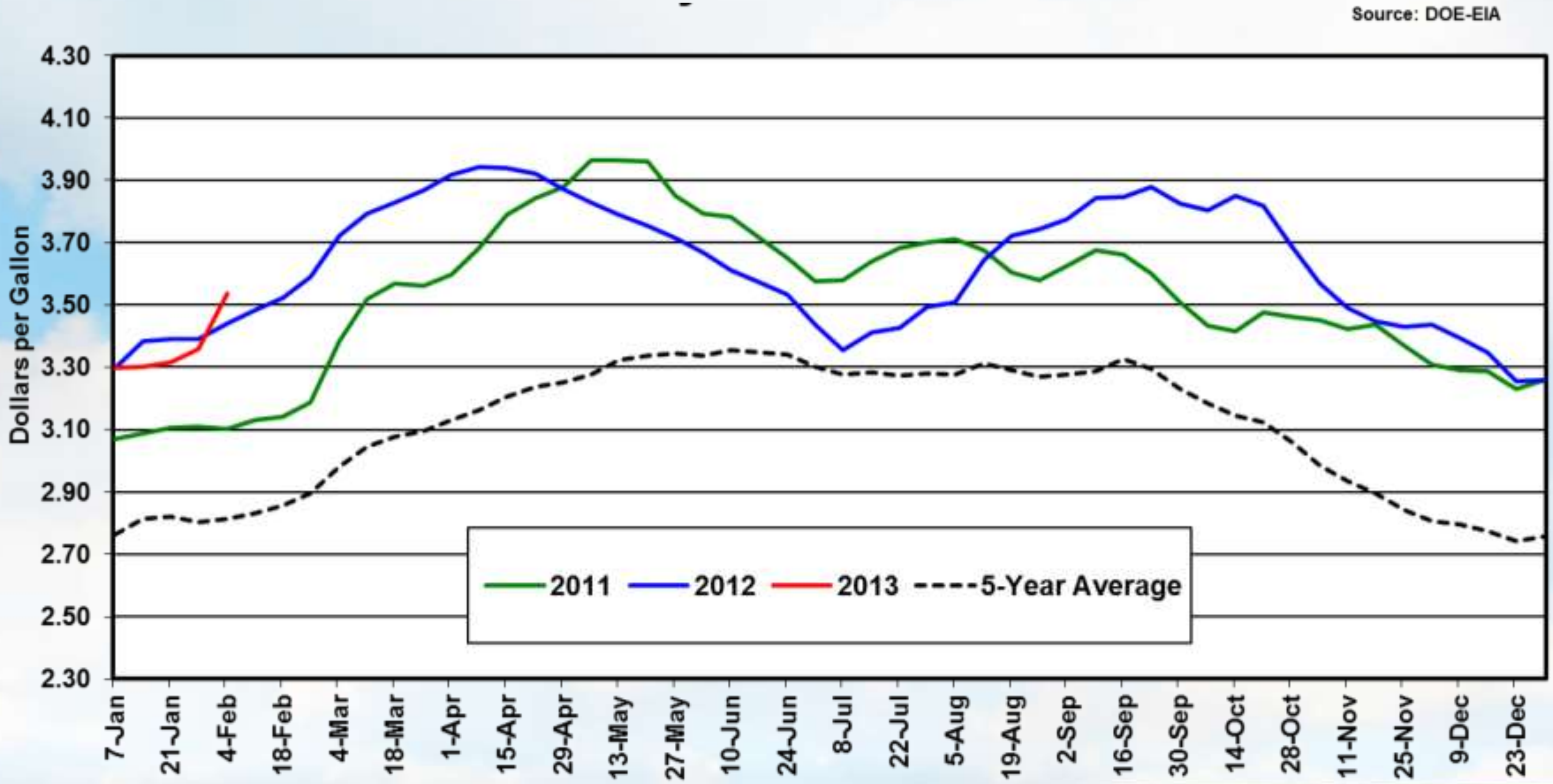
U.S. Energy Independence?!

The implications are extensive and not yet understood, nor are all variables anticipated.

- **Global Socio-Political Issues**
- **Wither the Arab Spring?**
- **Friends or Foes?**

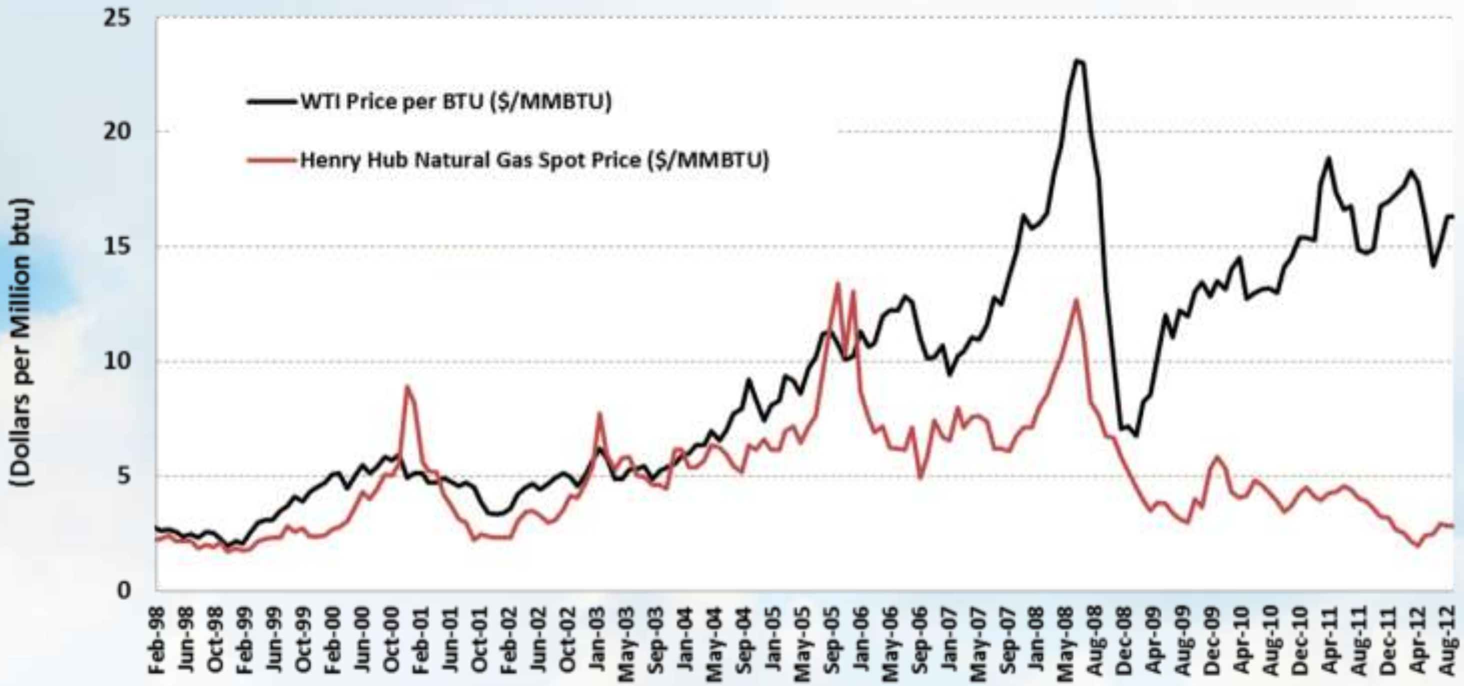
U.S. Weekly Retail Gasoline Price

The market is moving upward due to the most recent annual periods that are above the 5 year average



Comparing NatGas & WTI Crude $/BTU

Given recent economics of $16.33 versus $3.34 it is logical to pursue and develop the less expensive source

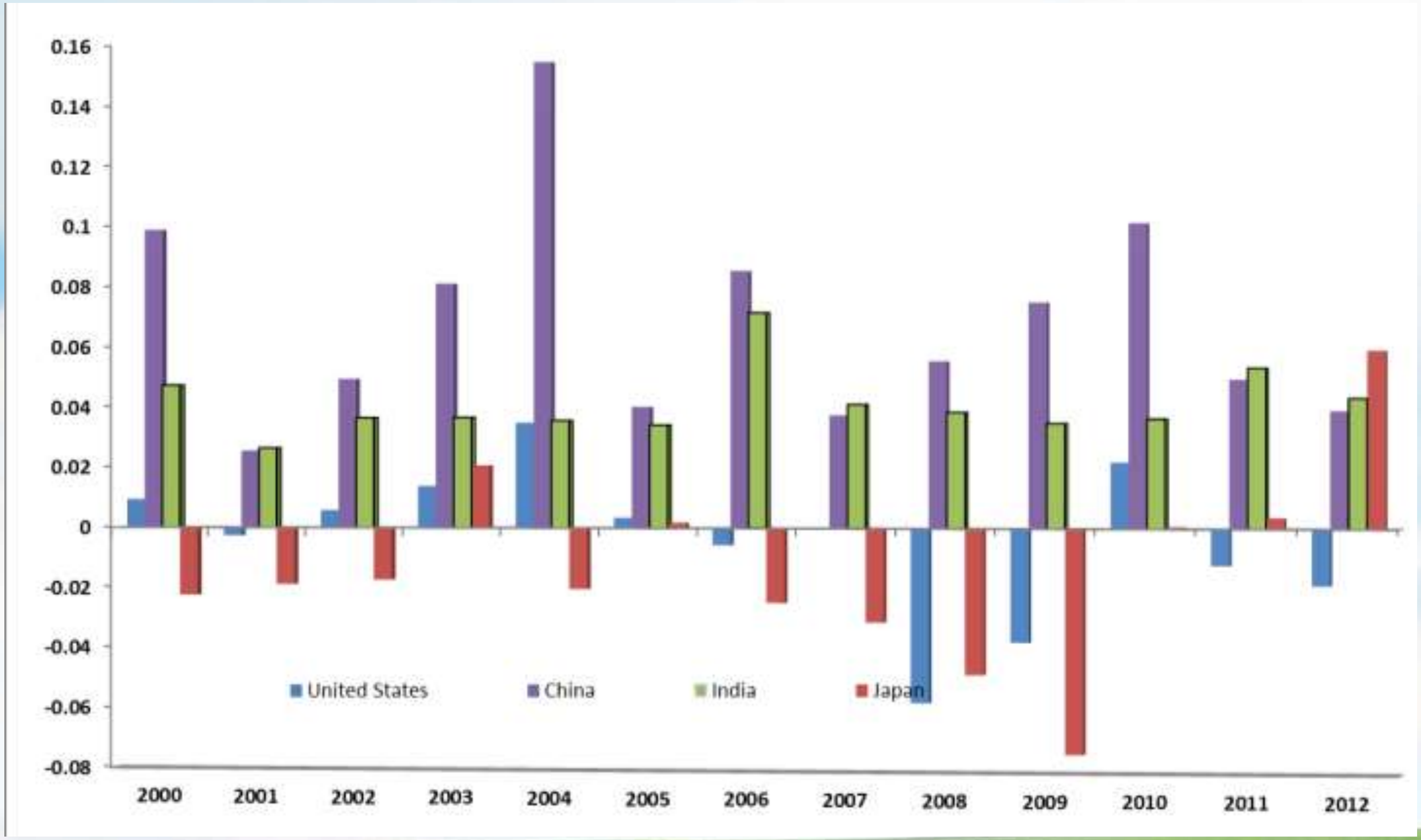


Note: 1 barrel of Crude contains 5.8 million btu

1 barrel of Crude Oil contains 5.8 million btu.
The current price (January 2013) of 1 barrel of Crude Oil is $94.74 per barrel.
Cost per million btu in the form of Crude Oil = $94.74/5.8 = $16.33.
Cost per million btu in the form of Natural Gas = $3.34.

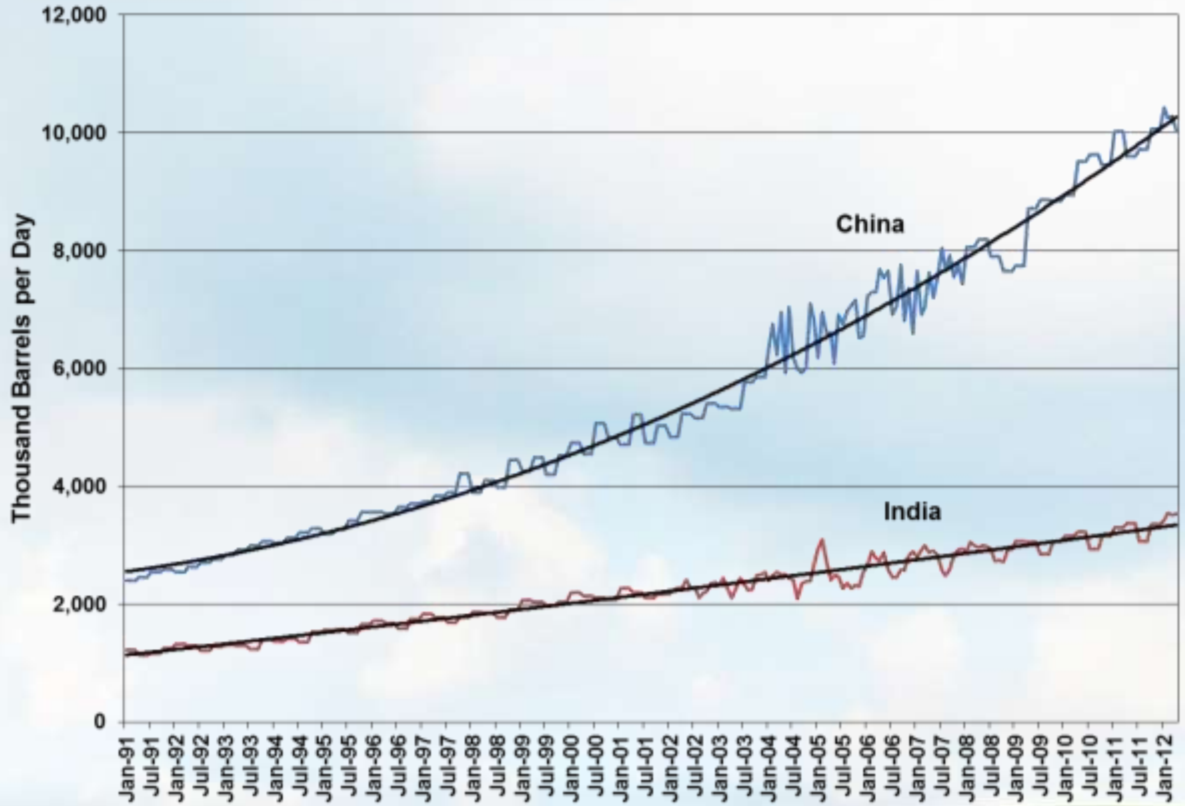
Percent Change in Petroleum Consumption

US and Japan are relatively small or have been declining; China and India have been growing strongly



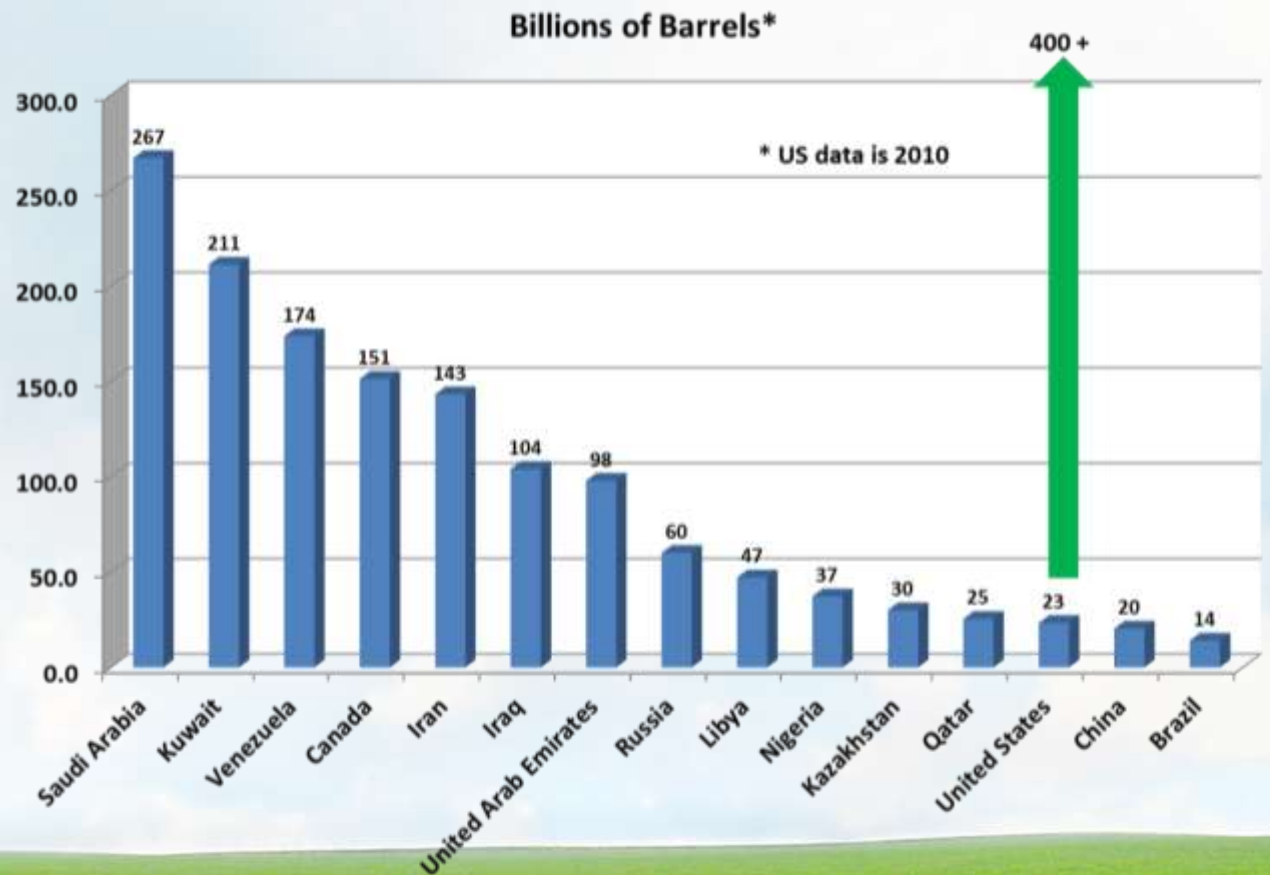
China and India Petroleum Consumption

Increased modernization in India may lead to a significant increase in demand and consumption there.



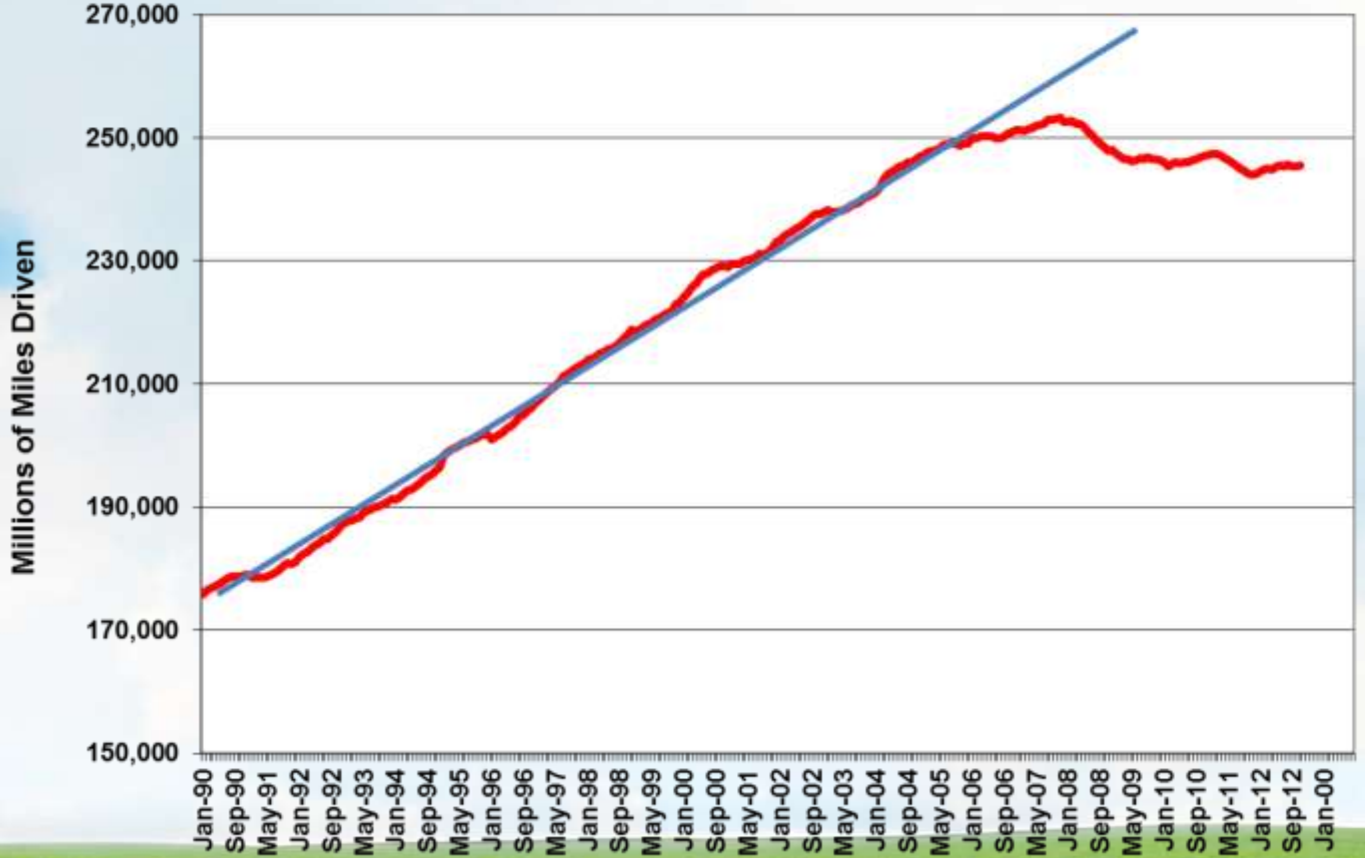
2012 Proven Crude Oil Reserves

USGS reported data does not include the recent industry reports of the shale oil finds in Texas, North Dakota, etc.

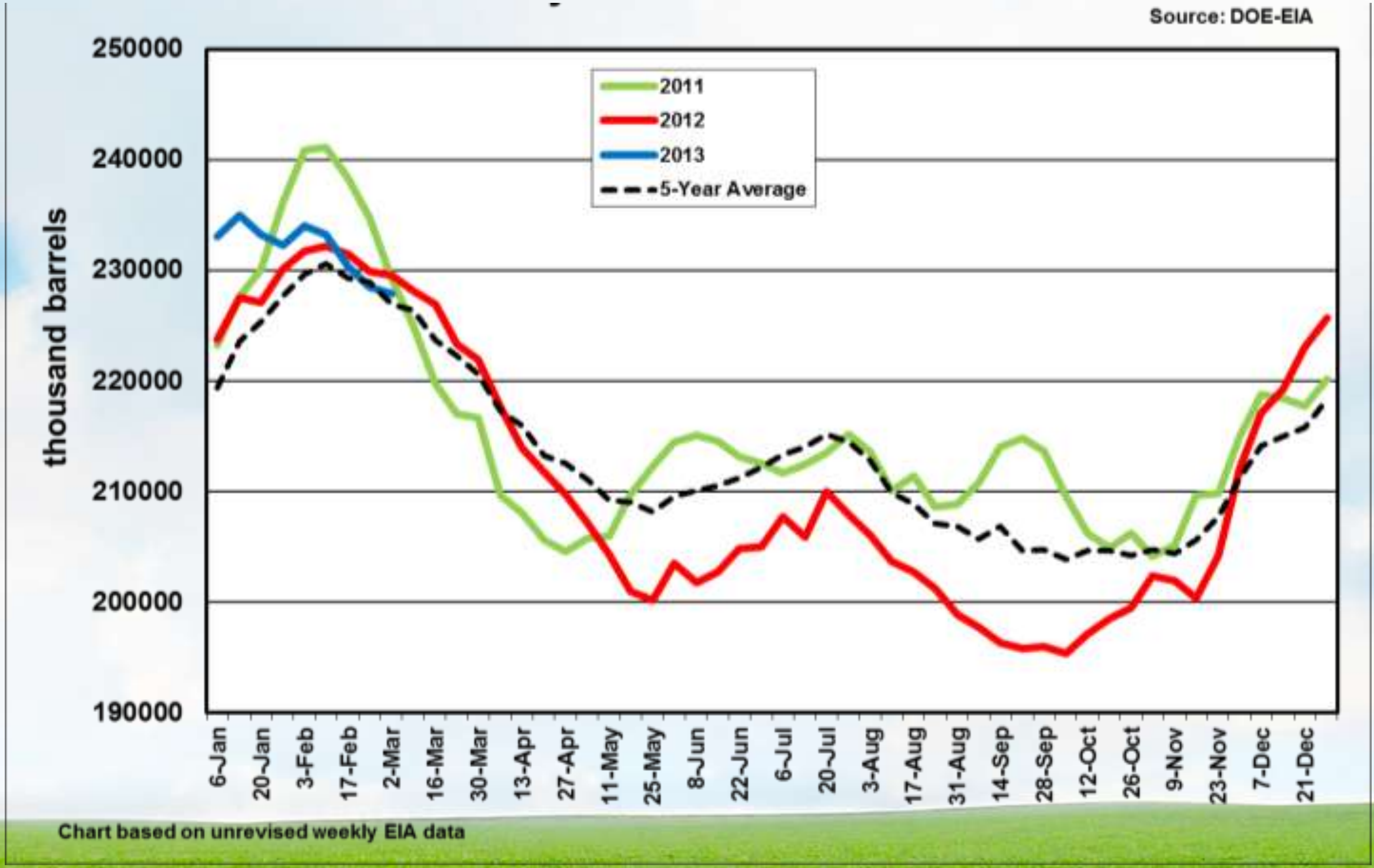


Miles Driven (12 Months Average)

The U.S. population limited driving since the Dec. 2007 recession started, holding down consumption and price.

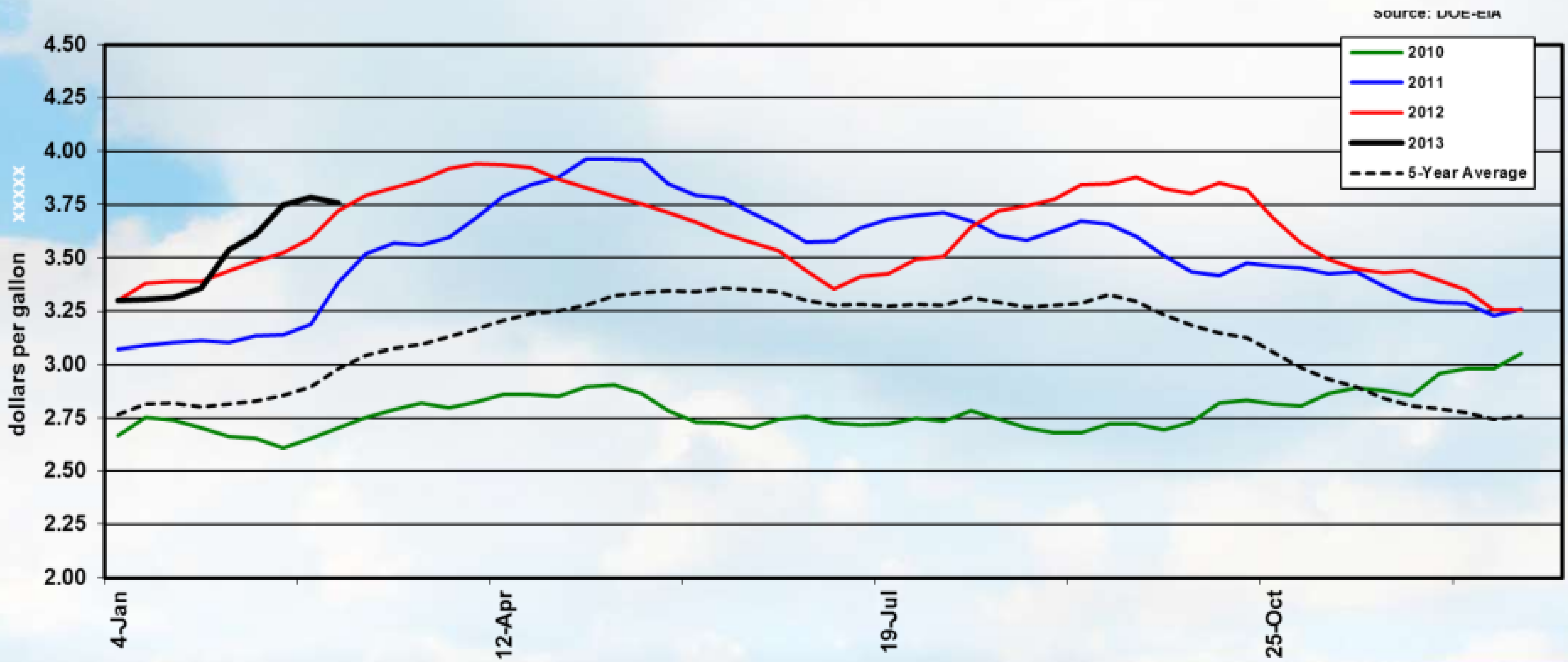


U.S. Weekly Gasoline Stocks

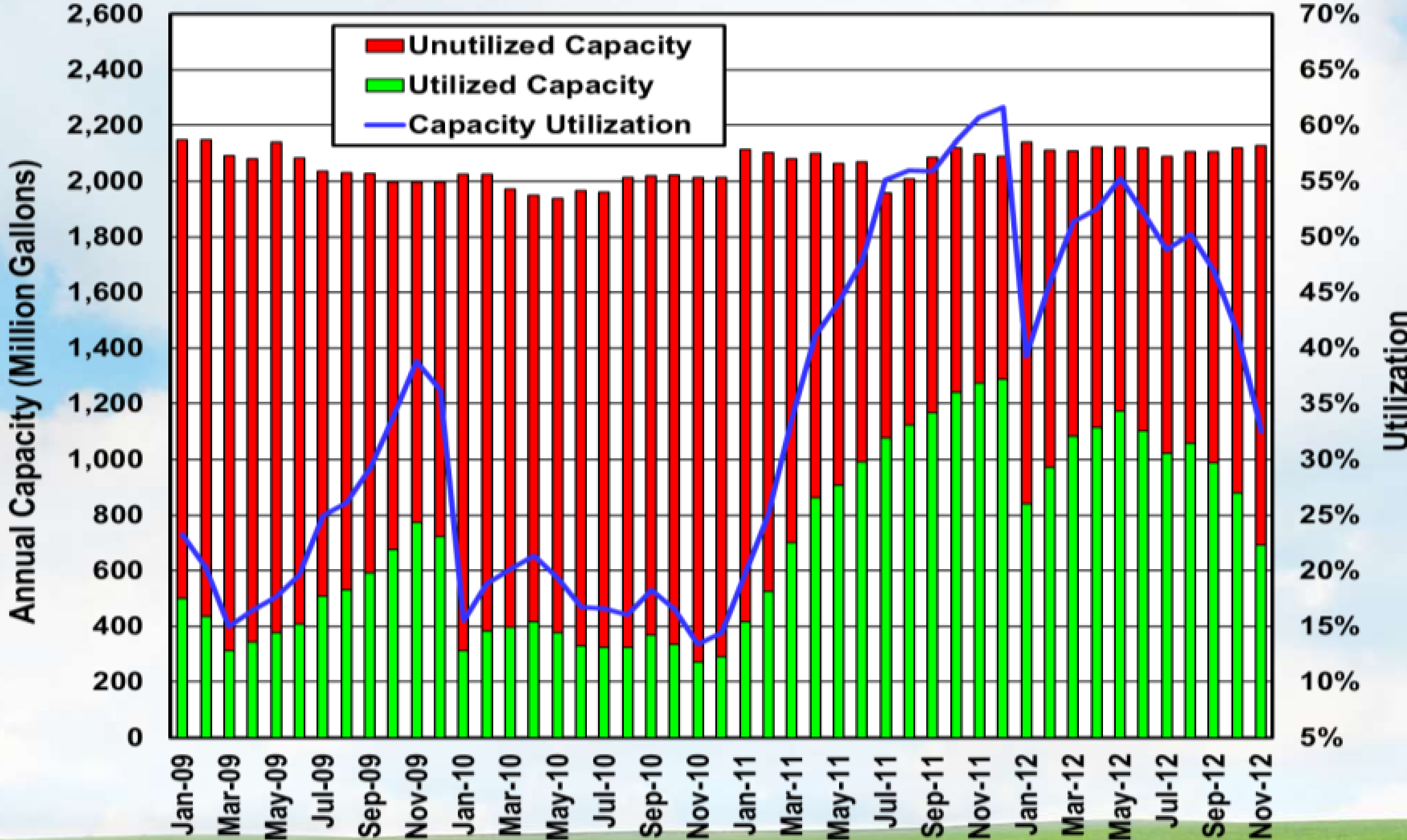


US Weekly Retail Gasoline Prices

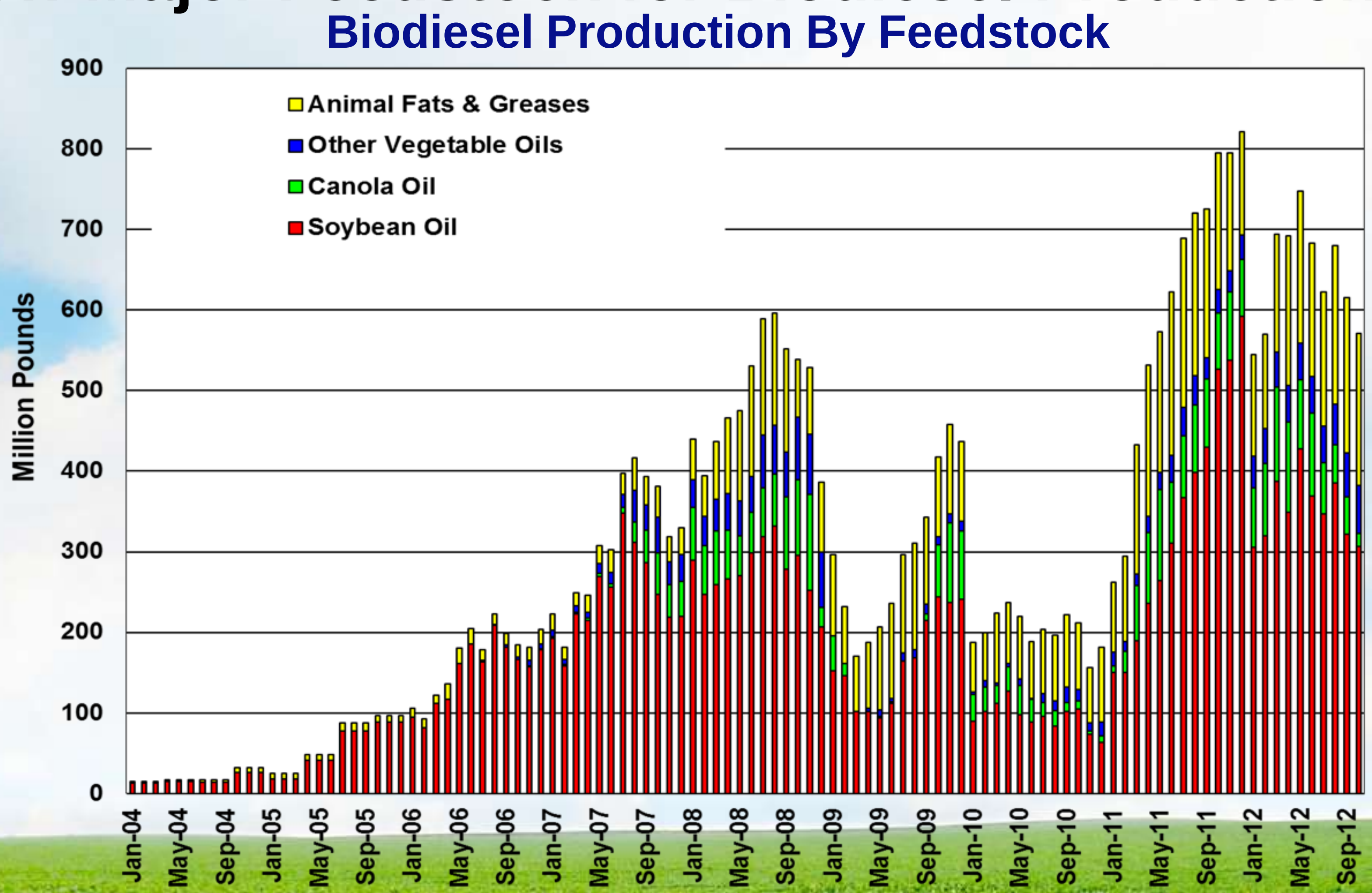
Note Summer Driving season; New Normal for recent years are well higher than the 5 year average.



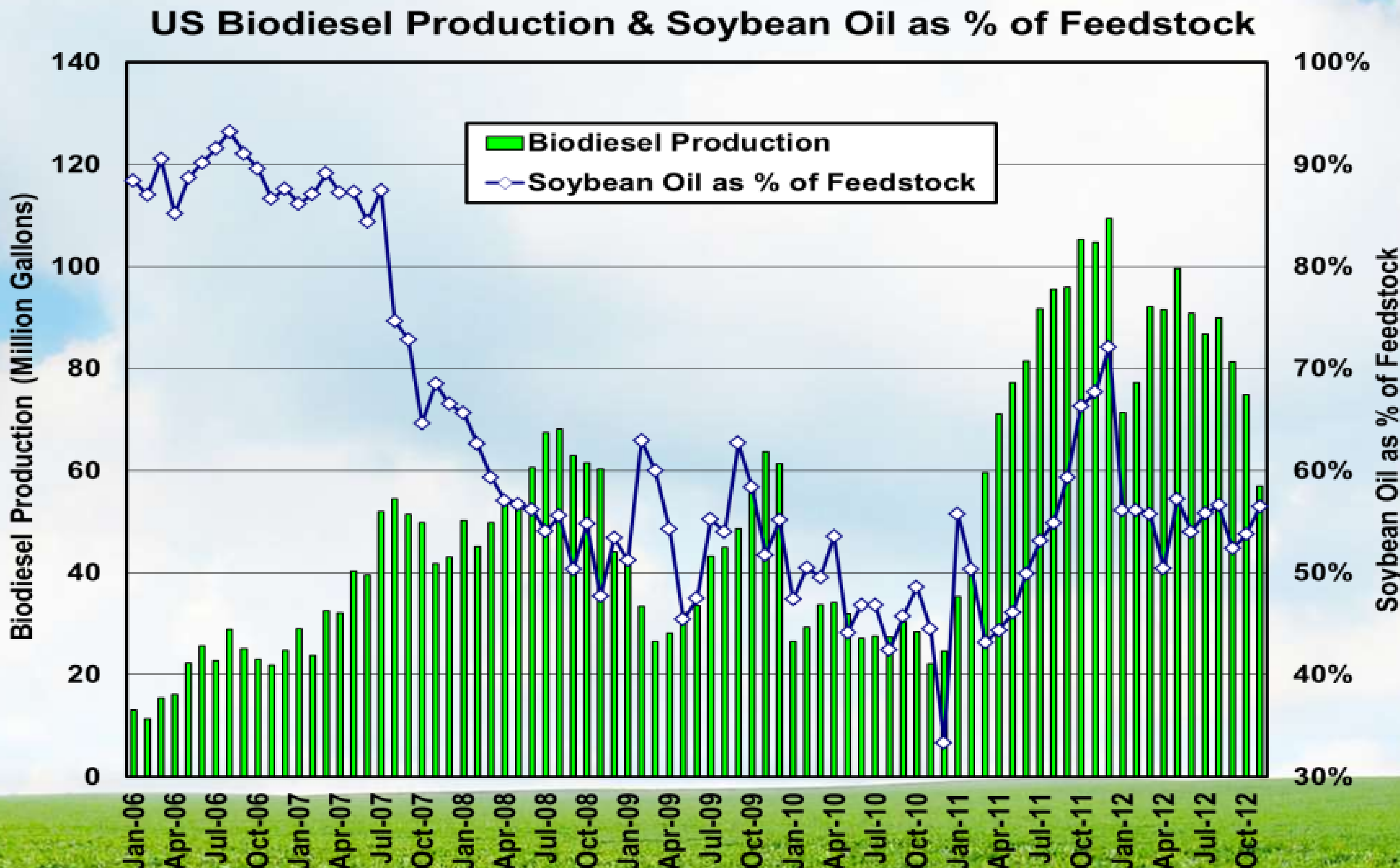
There is still Unused Biodiesel Capacity



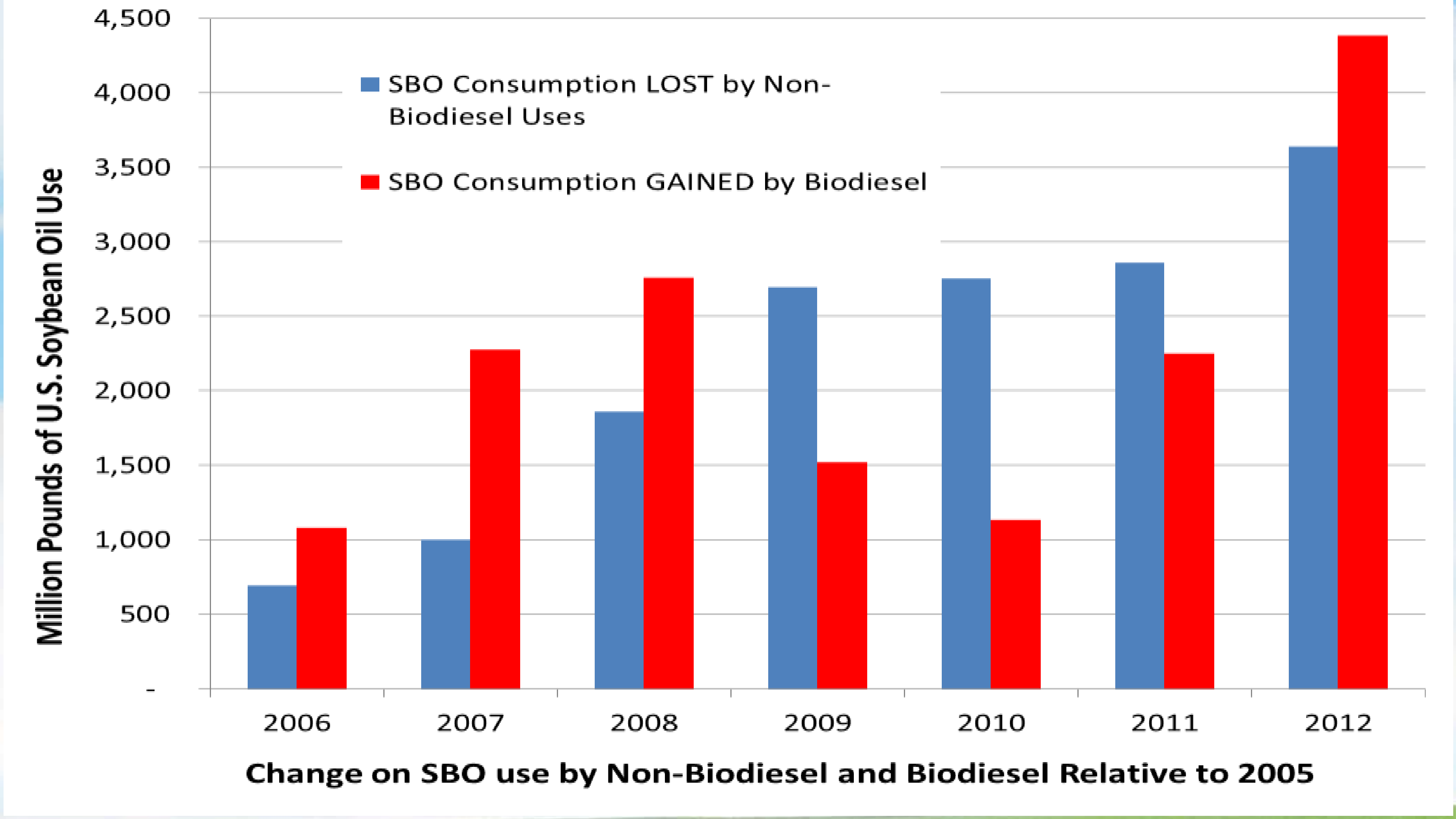
Animal Fats , Greases and Industrial Corn Oil are now Major Feedstock for Biodiesel Production



SBO Share of Feedstocks Declined, yet Biodiesel Still a Positive Factor for the Soy Complex

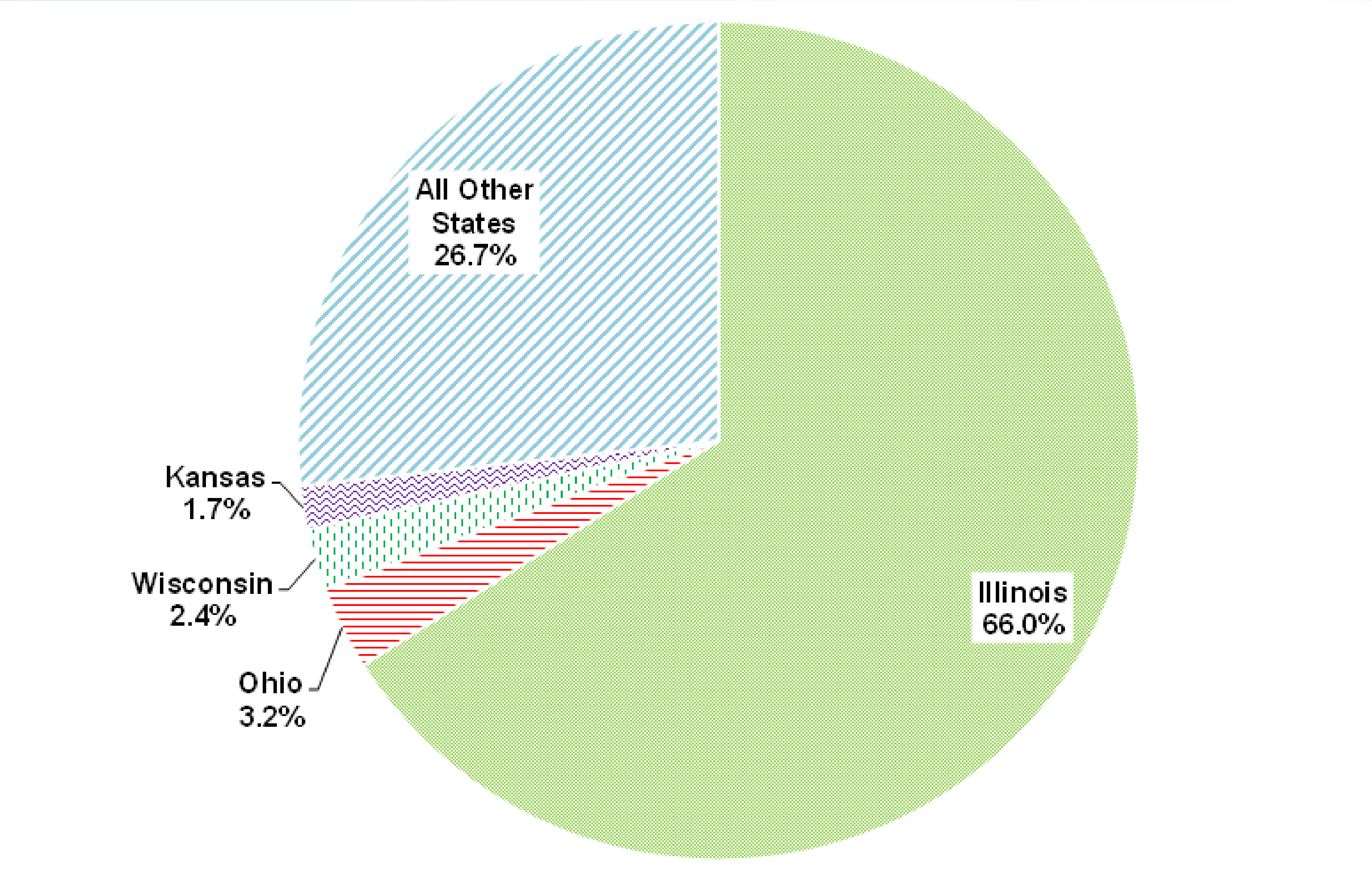


Biodiesel Offset SBO Use Loss to Other Oils



State Market Share of Containerized Grain and Soybean Export Inspections

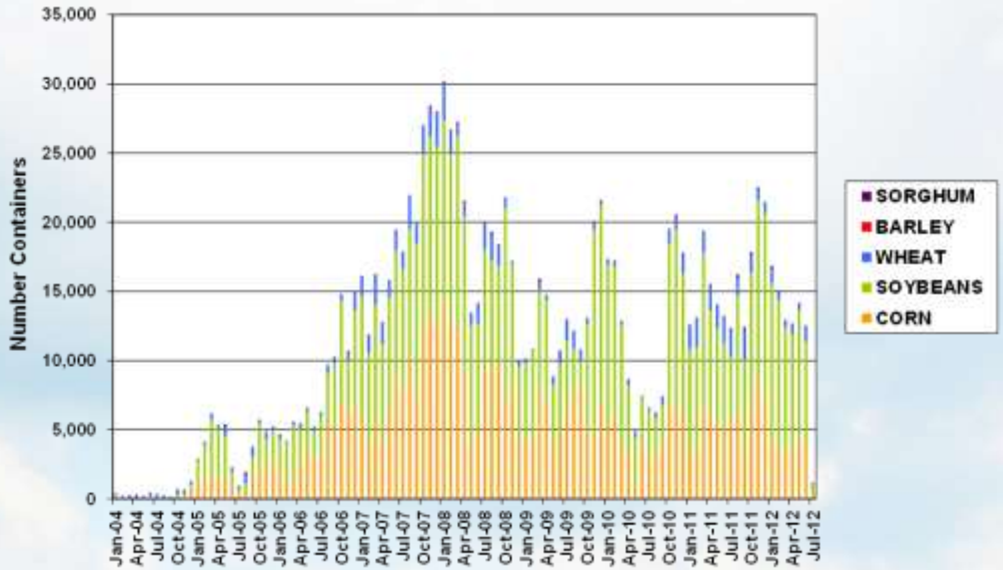
Illinois is currently a major hub for containerized grain and soybean exports.



Export Container

Current Situation

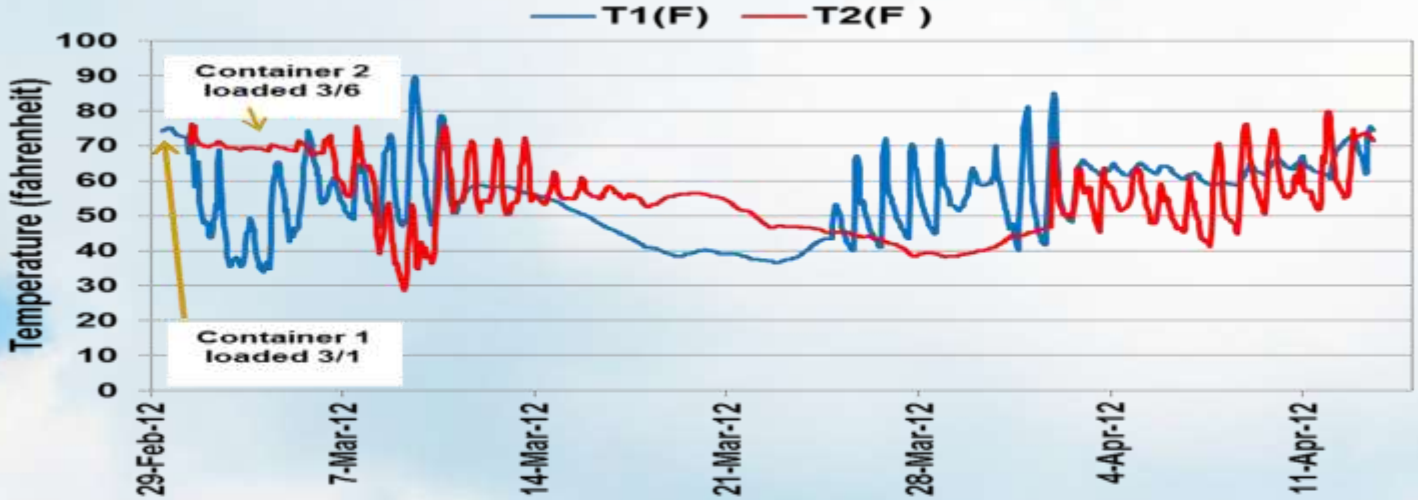
- There is a current average weekly availability of 2,500 containers and a yearly demand of nearly 129,000 twenty-foot equivalent containers.
- There are currently around 14 grain and soybean transloading facilities in Illinois.
- In 2010/11, over 28 million bushels of soybeans were moved via container from Illinois.

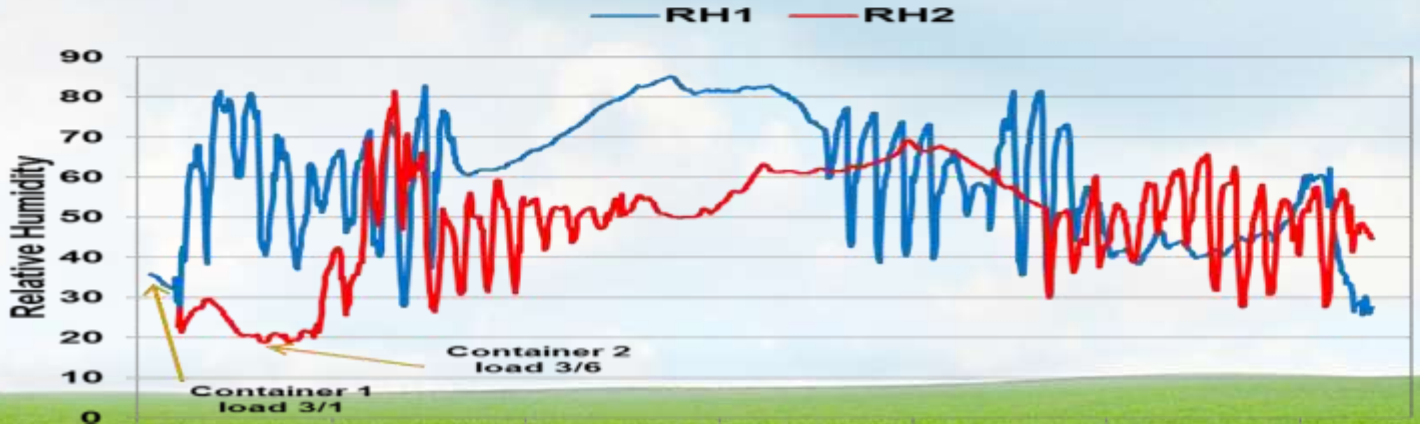


Source: US Waybill Data Informa Economics

Quality Analysis

Illinois Soybean Association Quality Analysis Project, 2012





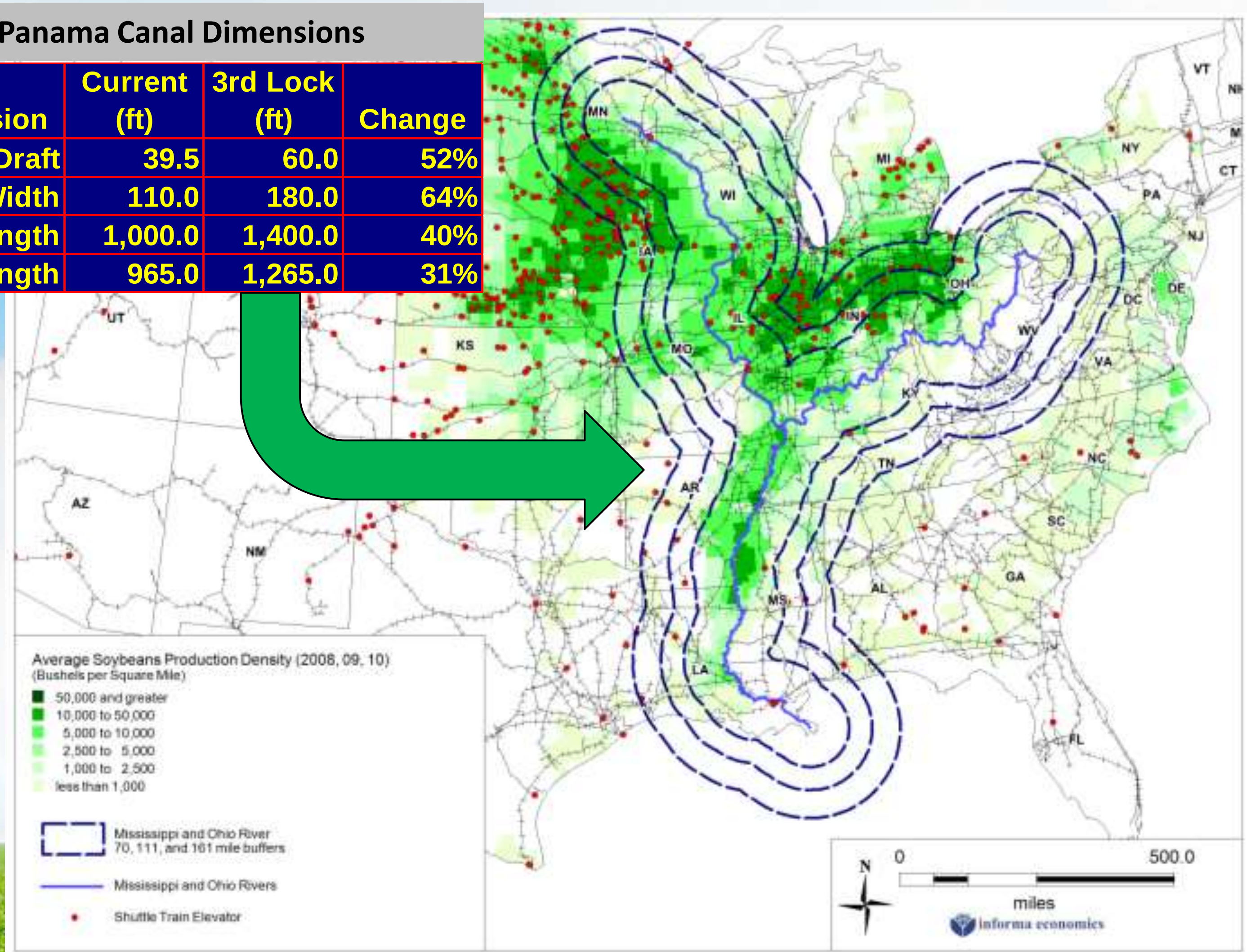
Source: Illinois Soybean Association

Panama Canal Expansion

Implications of the Panama Canal expansion in 2015 are illustrated below.
NOTE: Vessel draft limited to 50' in the 3rd set of locks. What will be draft at New Orleans?

Panama Canal Dimensions

Dimension	Current (ft)	3rd Lock (ft)	Change
Draft	39.5	60.0	52%
Width	110.0	180.0	64%
Length	1,000.0	1,400.0	40%
Ship Length	965.0	1,265.0	31%



Soybean Planted Acreage Impact

- **70 miles**
  - **26.7 mil.**
- **111 miles**
  - **27.9 mil.**
- **161 miles**
  - **49.6 mil.**

(*two-thirds U.S.*)

44

Container Soybean Exports – An Illinois Opportunity

Illinois farmers have a unique opportunity to export containerized soybeans.

- The container movement is determined by the large retailers and the bulk movements are determined by soybean and grain production areas.
  - ◇ If the production and container yards are in different locations, the bulk product is shipped by rail to the export terminal to be transloaded into containers before being loaded onto the ocean ship.
  - ◇ If the production is located near rail terminals (traditionally within 50 miles but some farmers are willing to transport 100 miles), the soybeans are trucked directly to the rail terminal and transloaded into containers before being shipped to the export terminal. This is the opportunity for soybean producers in Illinois.
- Transloaders in Illinois allow agricultural products to be trucked directly from farm to rail terminal or processing facility to rail terminal for container export. This reduces the handling required to transload at the export terminal.
- Railroads and ocean carriers have an incentive to encourage containerized soybeans, if the price is competitive with bulk.
- Containerized exports potentially represent a steady stream of consumption for Illinois farmers.

Closing Points to Consider

- What challenges exist
  - Balance transport modes in a competitive world
    - From origin to destination, time, logistics and routings
  - Remain competitive in production and distribution
    - Costs and Market Access
  - Respond to challenges that undermine competitive advantages, *e.g.*, GMO-non-GMO labels
- What can we do as a nation to "fix" these problems
  - Apply commercial creativity and collaboration
    - R&D, Infrastructure, Public-Private Partnerships, Connectors, Mavens and Salespeople
  - Ensure level playing fields
    - Trade agreements, Business practices, Quality measures

ILLINOIS SOYBEAN ASSOCIATION

PRODUCING RESULTS

Thank You!

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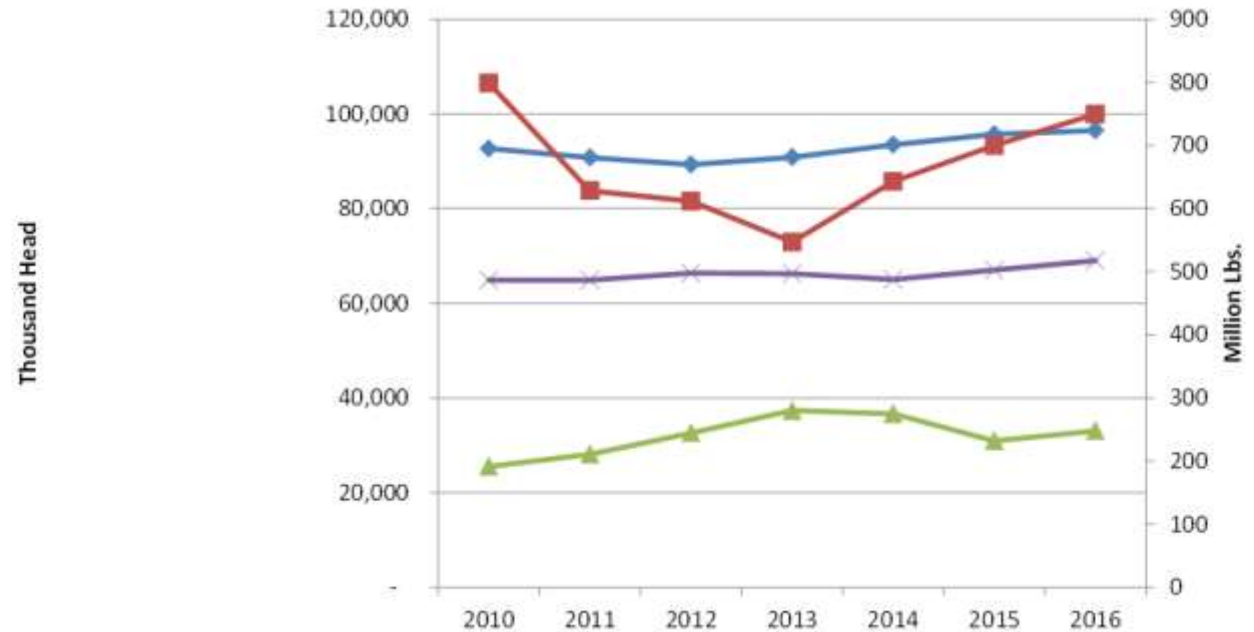
Funded in part by the Illinois soybean checkoff.

2012 Drought

An aberration from Trend

Livestock Inventory Changes Forecast After Accounting for Drought

Broiler inventories are hit hardest by the drought but are expected to rebound quickly. Cattle and hog inventories which change at a slower rate are impacted but are expected to gradually rebound.



	2010	2011	2012	2013	2014	2015	2016
Ending Cattle Inventory (000 Head)	92,683	90,770	89,300	90,853	93,492	95,687	96,487
Hog Inventory (000 Head)	64,887	64,925	66,361	66,250	65,000	67,000	69,000
Broiler Inventory (Million Lbs.)	799	628	612	547	643	700	750
Turkey Inventory (Million Lbs.)	191.6	211	245	280	275	232	248

Source: Informa Economics

Impact of 2012 Drought

Drought led to U.S. yield decline for 2011/12 preceding 3-year average of 42.4 bu/acre to 41.9 bu/acre. Illinois soybean yields declined as well 48.2 bu/acre to 47.5 bu/acre. Forecast yield 2012/13 is 39.3 bu/acre at the U.S. level and 43.0 bu/acre in Illinois.

- The widespread drought of 2012 affected corn and soybean production in the world's principal feed grains and oilseeds producing region and will lead to reduced herds of grain and oilseed fed livestock, who are the primary market for soybean producers in Illinois.
- High prices in soybean and corn for 2012 can be expected to give way to high supply conditions in subsequent years when growing conditions improve, and yields return to long-term trend levels.
- Because weather is a random event, the growing conditions for soybeans and corn in the US are forecast to be normal next year, implying yields and production much higher than in 2012 or 2011.
- Extraordinarily high feed prices this year will have the effect of reducing the livestock inventory in the US, particularly broilers, but also affecting hogs and cattle, and this will depress demand for feed products, including soybean-based feed products, in subsequent years.
- Beyond 2014, markets are expected to have rationalized the supply and demand for livestock and feed commodities, resulting in a return to long-term farm price trends for soybeans to about $11.20/bu. and for corn to about $4.20/bu.