Fertilizer Outlook & Technology Conference "A Modern Infrastructure for Modern Agriculture" November 15, 2016



Why Should Farmers Care About Transportation?

...Because our international competitiveness depends on it.

Costs of transporting soybeans: U.S. vs. Brazil (per metric ton; 4th quarter, 2015)

Davenport to Shanghai

Truck - \$8.38

Barge - \$25.51

Ocean - \$27.77

Total Trans - \$61.66

Farm Value - \$315.03

Customer Cost - \$376.69

T. as % of Cust. Cost – 16.37%

Sioux Falls to Shanghai

Truck - \$8.38

Rail - \$54.80

Ocean - \$14.90

Total Trans - \$78.08

Farm Value - \$308.65

Customer Cost - \$386.73

T. as % of Cust. Cost – 20.19%

N. Mato Grosso to Shanghai

Truck - \$76.94

Ocean - \$20.00

Total Trans - \$96.94

Farm Value - \$286.43

Customer Cost - \$383.37

T. as % of Cust. Cost – 25.29%

Source: USDA



The Soy Transportation Coalition – Farmer funded & farmer led

Established in 2007. Comprised of 13 state soybean organizations, the United Soybean Board, American Soybean Association.



























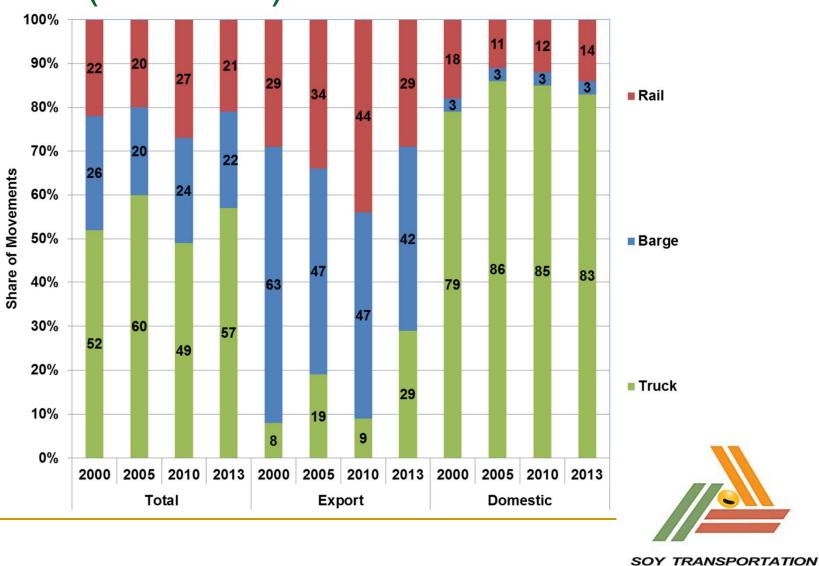








U.S. Soybean Modal Shares by Market Position (ton miles)



Trucking Concerns

- Freight demand by all modes of transportation will increase from 18.5 billion tons in 2010 to 27.5 billion tons by 2040; Demand for trucking will increase from 12.5 billion tons to 18.5 billion 50% increase (Source: U.S. DOT)
- Since 1980, miles of public roadways have increased by only 4.5% (Source: U.S. DOT)
- Widespread shortage of truck drivers
- Must be open to opportunities to get more out of the current system



Trucking Concerns

- "Safe Trucking Act" (Cong. Reid Ribble, R-WI); Would have allowed 6 axle, 91,000 lbs. semis on interstates vs. 5 axle, 80,000 lbs. limit; <u>Defeated</u> 187-236 in House (11-3-15)
 - Motorist safety
 - Shorter stopping distances (1 foot <u>less</u>)
 - Fewer trucks vs. status quo
 - Infrastructure wear & tear
 - Federal Bridge Formula compliant
 - 80,000 lbs. ÷ 5 axles (18 tires) = 4,444 lbs. per tire; 91,000 lbs. ÷ 6 axles (22 tires) = 4,136 lbs. per tire (308 lbs. less per tire)
 - Cost savings & efficiency gains
 - 137 additional bushels of soybeans or wheat; 146 additional bushels of corn per load
 - Trucking & Rail Increasingly not interchangeable



Better technology for better bridge maintenance & stewardship

- Current approach of visual inspection is variable & subjective; Can result in suboptimal stewardship of scarce resources & unnecessary bridge postings
- Partnerships with state DOTs or counties in 13 STC sponsoring states
- Pilot programs to utilize technology to better evaluate the true condition of our bridge inventory
 - "Sixteen critical (embargo) bridges previously posted in lowa...were re-evaluated using diagnostic load testing...Subsequently, the Office of Bridges and Structures was able to justify removal for the <u>majority</u> of the postings." (Source: lowa DOT)
 - "(Norm) McDonald (State Bridge Engineer Iowa DOT) estimates several dozen of the nearly 4,100 bridges maintained by the state have been field load tested. The number is even less at the county level. 'Typically there's an increase in bridge capacity when you do that, like <u>75 percent of the time</u>,' McDonald contends." (Source: Iowa Soybean Review)



Locks & Dams: Despite recent successes (WRRDA, IWT increase, additional \$), concern remains

- A predictably good inland waterway system is better than a hypothetically great one.
 - Should we transition from a "build & expand" approach to a "preserve & maintain" approach? Viabilility? Cost savings?
 - Cost of 1 lock construction project (\$376.8 million) is approximately equal to the cost of 9 major rehabilitation projects (\$40.7 million).



Funding approach for locks & dams – A recipe for cost overruns, inefficiency

- <u>How</u> we allocate money is just as important as <u>how much</u> money we allocate.
 - Cost overruns & project delays should not be viewed as unintended consequences but rather as predictable outcomes.
 - We endeavor to construct expensive, multi-year infrastructure projects via unpredictable annual appropriations.
 - Could it ever be possible for the legislative process for improving locks & dams to resemble surface transportation?
 - Opportunities for alternative financing (private sector)?



Thank You

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