



February 16, 2016

Chairman Proehl and members of the House Committee on Transportation:

The Kansas Soybean Association and the Soy Transportation Coalition respectfully encourage your support for allowing six axle, 92,000 lbs. and seven axle, 95,000 lbs. semis to operate on state and local roads within Kansas. Research supports doing so would result in enhanced motorist safety, diminished wear and tear on our state's roads, reduced carbon emissions, and greater efficiency of transporting soybeans, grain, and other freight.

While the proposed truck configurations will permit more freight to be transported per semi, the size and maximum allowable length of the truck will not increase. A semi will simply be allowed to utilize a higher percentage of its available capacity.

Research highlights that adding a sixth or seventh axle to the above weight configurations will create additional braking capacity so that stopping distances will be less than a five axle, 80,000 lbs. truck.

Moreover, allowing such semis will result in fewer large trucks on the road compared to maintaining an 80,000 lbs. weight limit, which will result in fewer motorist accidents and injuries. Research validates that motorist safety is strongly a function of the number of semis over a given stretch of road. Allowing such semis will result in a decrease in truck density – resulting in an increase in motorist safety.

The six axle, 92,000 lbs. and seven axle, 95,000 lbs. semis will result in a reduction of weight per tire of 262 lbs. and 486 lbs. respectively compared to a five axle, 80,000 lbs. semi – reducing wear and tear on Kansas roads. In addition, the proposed configurations are compliant with the weight restrictions instituted by the Federal Highway Administration's Federal Bridge Formula.

Because railroads have emphasized long haul service over the past 30 years, farmers and grain handlers must increasingly utilize trucking to access the rail network. Given how trucking and rail are less interchangeable, the potential modal shift from rail to trucking due to the adoption of the proposed configurations is significantly limited.

For transporting soybeans and soy products, allowing the proposed semi configurations will result in fewer truck trips, fewer gallons of fuel consumed, fewer tons of carbon dioxide emissions, and reduced fuel costs. For example, the use of a six axle, 92,000 lbs. semi will enable a farmer to transport an additional 153 bushels of soybeans or wheat or 164 additional bushels of corn per load.

We encourage you to support this proposal that we believe will enhance safety and efficiency on our roads and bridges.

Sincerely,

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HEAVIER SEMIS: A GOOD IDEA?



PROJECT DESCRIPTION

A study, funded by the soybean checkoff, analyzes the impact of increasing semi weight limits on federal roads and bridges from an 80,000 lbs., five axle configuration to a 97,000 lbs., six axle configuration on: 1.) Motorist safety; 2.) Infrastructure wear and tear; and 3.) Potential cost savings and efficiency gains for agriculture and the U.S. economy.

Increasing Truck Weight Limits without Increasing Truck Size



80,000 lbs., 5-Axle, 53 ft. truck



97,000 lbs., 6-Axle, 53 ft. truck

**Note: Six axle trucks for soybean and grain transport will often result in an increase in trailer length from 42 feet to 50 feet – still 3 feet shorter than the 53 feet maximum length allowable under federal law.*

FUTURE DEMAND FOR FREIGHT MOVEMENT BY SEMIS



KEY FINDING: Demand for trucking is projected to increase, but supply of trucking services is not keeping pace.

According to the U.S. Department of Transportation, the volume of freight demand by all modes of transportation – truck, rail, maritime, and air – is expected to increase from 18.5 billion tons in 2010 to more than 27.5 billion tons in 2040 – a 48 percent increase. Demand for trucking is expected to increase from 12.5 billion tons in 2010 to 18.5 billion in 2040 – an increase of 6 billion tons or 67 percent of the total growth in freight demand.

While demand for trucking continues to increase, trucking capacity has been challenged by:

1. Since 1980, the miles of public roadways have increased by only 4.5 percent.
2. Widespread and persistent shortage of truck drivers.
3. Recent declines in rail service have required trucks to accommodate more freight. While trucking and freight rail are less interchangeable modes of transportation, rail service challenges over the past couple years have resulted in a shift of freight from rail to truck.

If supply of trucking is not keeping pace with demand for trucking, we need to find safe and responsible ways to increase trucking capacity.

MOTORIST SAFETY



KEY FINDING: Adding a sixth axle will result in additional braking capacity so that the stopping distances of a six axle, 97,000 lbs. semi will be the same as a five axle, 80,000 lbs. semi.



SAME
STOPPING
DISTANCE

KEY FINDING: Allowing six axle, 97,000 lbs. trucks will result in fewer motorist casualties and injuries compared to the status quo.

Demand for trucking is expected to increase from 12.5 billion tons in 2010 to 18.5 billion in 2040 – an increase of 6 billion tons. This increase in demand can be accommodated by allowing six axle, 97,000 lbs. semis or by maintaining weight limits on federal roads and bridges at 80,000 lbs.

Motorist Safety Comparison: 6 axle, 97,000 lbs. vs. 5 axle, 80,000 lbs. (2022)



Total Semi Miles Traveled: **29.98 billion miles**
Fatalities per 100 million vehicle miles traveled: **1.66**
Number of fatalities due to accident with semis: **498**



Total Semi Miles Traveled: **24.09 billion miles**
(5.9 billion mile reduction)
Fatalities per 100 million vehicle miles traveled: **1.66**
Number of fatalities due to accident with semis: **400**

Motorist safety is more a function of the number of semis on the road and less a function of the weight of individual semis.

It is projected that allowing six axle, 97,000 lbs. trucks will result in 98 fewer fatalities by 2022.

The above table is comparing only the 20 percent of semi traffic that is constrained by weight. Since 80 percent of semis reach their space limitations – “cube out” – before reaching road weight limits, beneficiaries of an expanded six axle, 97,000 lbs. configuration are limited to industries transporting products and commodities that are heavier.

INFRASTRUCTURE WEAR & TEAR



KEY FINDING: The impact on roads of a six axle, 97,000 lbs. semi is less than a five axle, 80,000 lbs. semi.



$80,000 \text{ lbs.} \div 18 \text{ wheels (5 axle)} = 4,444 \text{ lbs. per tire}$



$97,000 \text{ lbs.} \div 22 \text{ wheels (6 axle)} = 4,409 \text{ lbs.}$

A six axle, 97,000 lbs. semi will reduce the load weight per tire by 35 lbs.

KEY FINDING: Most research has found that stress to bridges depends more on the truck's total load than the number of axles.

Proposals allowing six axle, 97,000 lbs. trucks should include a user fee to generate additional revenue for bridge maintenance.

COST SAVINGS, EFFICIENCY GAINS, & ENVIRONMENTAL IMPACT



KEY FINDING: For transporting soybeans and soy products, allowing six axle, 97,000 lbs. semis will result in 1.2 million fewer truck trips, 5.5 million fewer gallons of fuel consumed, 56 thousand fewer tons of carbon dioxide emissions, and between \$11 million - \$28 million in reduced fuel costs.

Reduced Number of Trips for Soybeans & Soybean Products using Six Axle, 97,000 lbs. Trucks (in thousands)

	TRUCK TRIPS (80,000 LBS.)	TRUCK TRIPS (97,000 LBS.)	REDUCED TRIPS
Total	7,222	6,000	1,222
Soybeans	5,537	4,600	937
Soybean Meal	1,247	1,036	211
Soybean Oil	439	365	74

Reduced Fuel Consumption & Carbon Dioxide Emissions for Soybeans and Soybean Products using Six Axle, 97,000 lbs.

	GALLONS (80,000 LBS.)	GALLONS (97,000 LBS.)	REDUCED FUEL (GALLONS)	REDUCED EMISSIONS (TONS)
Total	67,008,862	61,476,020	5,532,842	55,904
Soybeans	48,714,435	44,692,142	4,022,293	40,642
Soybean Meal	16,642,643	15,268,479	1,374,163	13,885
Soybean Oil	1,651,784	1,515,399	136,386	1,378

KEY FINDING: Allowing six axle, 97,000 lbs. semis will enable farmers to transport at minimum an additional 183 bushels of soybeans per load. By 2022, this will annually save soybean farmers 602,000 truck trips, 1.7 million gallons of fuel, and between \$4 million - \$8 million in reduced fuel costs.

SEMI WEIGHT LIMITS IN OTHER COUNTRIES VS. UNITED STATES

COUNTRY	WEIGHT	% ABOVE U.S.
United States	80,000 lbs.	0%
Russia	83,776 lbs.	5%
Canada	87,083 lbs.	9%
European Union	88,185 lbs.	10%
China	94,799 lbs.	18%
Mexico	106,924 lbs.	34%
Brazil	125,663 lbs.	57%
Scandinavia	132,277	65%

KEY FINDING: Farmers in Brazil – the second leading soybean producer after the U.S. – are able to haul 57 percent more soybeans per semi load than U.S. farmers.

The full study, "Heavier Semis: A Good Idea?" can be accessed at www.soytransportation.org or www.unitedsoybean.org.

Established in 2007, the Soy Transportation Coalition is comprised of thirteen state soybean boards, the American Soybean Association, and the United Soybean Board. The goal of the organization is to position the soybean industry to benefit from a transportation system that delivers cost effective, reliable, and competitive service.

Funded by the soybean checkoff