



INCREASE TRUCK WEIGHT LIMITS FOR AGRICULTURAL TRANSPORTATION FROM 80,000 TO 97,000 POUNDS

Statement of the Agricultural Transportation Efficiency Coalition (AgTEC) to the House Subcommittee on Highways and Transit

July 9, 2008

The Mission of the Agricultural Transportation Efficiency Coalition is “to improve the efficiency of transporting raw, unprocessed agricultural and forest products from farms and forests to processing facilities.”

Increasing truck Gross Vehicle Weights (GVW) on the federal highway system, while keeping individual axle weight limits at the current level, will improve productivity, fuel conservation, air quality, infrastructure conservation, and public safety, while reducing carbon emissions and traffic congestion.

In the case of unprocessed forest and farm products, which have relatively low value but are the basis of important value-adding industries, efficient and inexpensive transportation is especially important, since pulling out costs low in the chain magnifies savings higher in the chain. In recognition of this reality, these sectors have striven to build secondary processing facilities as close to the resource as possible, to minimize haul distances. Because of the short hauls—typically under 150 miles—and decentralized points of origin for forest and farm products, trucking is the only practical option for transport for the first leg from the forest or farm. It is also heavily favored in subsequent distribution among processors and markets.

- Trucks are the leading transport mode for the movement of fresh fruits and vegetables in the United States, with a market share of over 90 percent.
- Trucks are the largest carrier of produce to ocean ports for export.
- Ninety-five percent of livestock transportation is handled by truck, and fresh dairy products are primarily handled by trucks over relatively short distances.
- Nearly 90 percent of all raw wood (logs and pulpwood) is transported to the point of primary processing by trucks.

According to the U.S. Department of Agriculture’s latest grain transportation modal share analysis released in October 2004, trucks transported 68.4 percent of all domestic grain in the United States during the year 2000. Rail and barge shares are still declining, making trucks the increasingly dominant mode for grain transport in the United States. This trend is expected to continue. (The 2004 report is the latest data available from USDA on grain transport modal shares.)

Improving Global Competitiveness

U.S. global competitors haul their agricultural commodities to processing facilities at much higher Gross Vehicle Weights than is allowed in most U.S. states. Although liberal vehicle weights are allowed on some state and local roads, most agricultural and forest commodity transport is restricted to 80,000 pounds on federal highways. By comparison, the truck GVW limit for most European countries exceeds 110,000 pounds, with Finland and Sweden allowing seven axle trucks to haul up to 132,000 pounds.

The Place of Higher GVW in Trucking Efficiency Improvement

Forest and farm transporters have little control over the unit cost of fuel, and although these sectors are developing many means of improving trucking efficiency to reduce fuel consumption per ton-mile of cargo, such as reduced tare weights, innovative dispatching systems to increase percent-loaded-miles, and fuel-efficient driving techniques, increasing GVW is an important complement to these efforts and effectively multiplies their benefits. One study (University of Georgia's *Status and Future Sustainability of the U. S. Wood Supply System*, 2006) estimates up to an 18 percent cost reduction in the forest products industry for trucking logs to processing facilities if the legal GVW for trucks were increased from 80,000 to 97,000 pounds. (Summary attached.)

These benefits are important to the farm and forest trucking sector, but allowing increased GVWs on federal Interstates also provides real benefits to the public, such as:

- Allowing trucks loaded to state-legal maximums to use federal bypasses and avoid adding to congestion and traffic hazards in urban areas.
- Conserving fuel and thus reducing total emissions.
- By rationalizing haul routes and optimizing loads, reducing total infrastructure impacts and thus reducing highway maintenance costs.

It is important to stress that AgTEC is not recommending any increase to individual axle weight limits, in order to keep braking distances and road wear within current norms.

Research Supports Higher Truck Weights

As recent as December 2006, the Energy Security Leadership Council recommended increasing truck weights to boost fuel efficiency and reduce our dependence on foreign sources of oil. In 2002, Congress's own Transportation Research Board reported: "*U.S. weight limits are lower than the limits of most of the nation's trading partners, and heavier six-axle semi trailers... would be well suited to carrying international containers. Indeed, the benefits of increased truck productivity may appear more attractive today because of emergent concerns over capacity constraints throughout the freight transportation system.*" Even as far back as 1974, a study by the U.S. Department of Transportation called for a GVW limits to be increased of up to 105,500 pounds.

As trucks move more and more raw, unprocessed agricultural and forest commodities from fields and forests to points of primary processing, it will be essential to reform truck weight limits on our federal Interstates to meet just-in-time shipper and processor requirements, reduce congestion to make our roads safer, and reduce fossil fuel energy use to help make our environment cleaner.

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HELP KEEP U.S. AGRICULTURAL AND FOREST PRODUCTS MOVING!



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TECHNICAL RELEASE

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POTENTIAL IMPACTS OF 97,000-GVW ON LOGGING COSTS

Trucks/Trucking: efficiency/productivity

August 2006

www.forestresources.org/members/serpub/06-R-18.html

INTRODUCTION: With fuel prices rising, improving trucking efficiency is now more crucial than ever. Fuel costs are reducing the profit margins on every industry in the economy, and logging is certainly no exception. This study evaluated the cost implications for haulers of raw forest products associated with increasing the maximum allowable Gross Vehicle Weight (GVW) of tractor-trailers from the current limit in most states of 80,000 pounds to 97,000 pounds.

In addition to providing fuel-cost savings, increasing the allowable GVW also would streamline trucking across national borders. Current maximum GVWs allowed by Mexico and Canada are 106,920 pounds and 95,900 pounds, respectively. According to the Americans for Safe and Efficient Transportation (ASET), the payload increase would make trade more parallel and obtain \$14.5 billion of potential savings in shipping costs. For an individual truck, ASET also states that tractor-trailers (with 6 axles rather than 5) can reduce vehicle miles traveled (VMT) by 11% and reduce fuel usage by 6%. Accidents would decrease as well, as fewer trucks driven by a smaller pool of more highly qualified drivers would be on the road.

DATA AND ANALYSIS: This study specifically compared the costs of operating a standard logging tractor-trailer at 80,000-pound GVW to that of a tractor-trailer designed for a 97,000-pound GVW, on a cost per ton-mile basis. To permit the higher GVW, at a minimum the trailer would require an additional (or third) axle, thus creating a 6-axle instead of a 5-axle rig. Retrofitting existing trailers by adding a third axle did not appear to be generally feasible, judging from discussions with trailer manufacturers. To take advantage of this greater GVW opportunity, trailers would instead have to be replaced with those manufactured with the additional axle.

There are other costs associated with increasing payload, but while many of these are intuitively obvious, they are difficult to estimate. A truck equipped for and designed to handle a GVW of 80,000 pounds could likely haul the extra weight, but with sacrifices in fuel mileage, travel speed, and wear and tear on truck engine, transmission, suspension, and other components. To try to assess these potential impacts, we evaluated the cost of a heavier, more powerful, and more expensive truck with an assumed longer lifespan.

We used cost data wherever possible from the Wood Supply Research Institute trucking study performed by Auburn University (summarized in FRA Technical Releases 05-R-1 and 05-R-8) to permit comparisons between studies and to exploit their recent research. We obtained additional information from truck dealers and from logging contractors with experience operating trucks rated for higher GVW.

We considered three truck configurations:

- **Current Rig:** A five-axle tractor-trailer combination typical of those operated today, with maximum GVW of 80,000 pounds.
- **97,000 GVW with 3-axle trailer:** Same tractor as in base case but pulling a 3-axle trailer, allowing it to haul 97,000 pounds GVW. Many contractors will face this “trailer replacement situation” if the higher GVW is allowed.
- **97,000 GVW with larger engine and 3-axle trailer:** In this configuration, the tractor uses a larger engine to pull a 3-axle trailer. Some feel that trucks will require these types of upgrades to handle higher GVW effectively; in some states, where GVWs greater than 80,000 pounds are now allowed, these rigs are common.

ASSUMPTIONS: Tare weights for the three scenarios were 28,200 pounds, 29,250 pounds, and 32,885 pounds, respectively, resulting in allowable payloads of 25.90 tons, 33.88 tons, and 32.06 tons. Fixed costs for trucks and trailers were estimated assuming that trucks were bought new, paid for in four years, and operated for a total of six years. We calculated a monthly payment assuming 80% of the entire purchase price was financed at 7.5% interest for 48 months. Since payments would be made in only two-thirds of the years in which the truck was owned and operated, we multiplied the monthly payment by two-thirds to allocate the fixed cost evenly over the life of the truck.

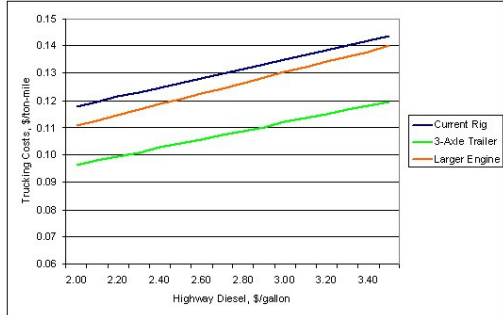


Fig. 1: Trucking cost per ton-mile as affected by highway diesel costs on an average haul of 60 miles.

The base case tractor purchase price was assumed to be \$90,000, and the tractor with the larger engine was assigned a price of \$110,000. Two-axle trailers were priced at \$19,000, compared to \$22,300 for three-axle trailers. Annual insurance and tax/tag costs were set at \$4,850 and \$1,200, respectively, for each scenario.

RESULTS: Fuel prices have a direct and immediate effect on any transportation costs, including those of log trucking (Fig. 1). In general terms, a \$0.50 per gallon increase in diesel prices increases cost per ton-mile by 1 to 2 cents. For every \$.10 increase in fuel price, the ton-mile cost increases by a factor of approximately \$.0017 for the

current rig, \$.0015 for the 3-axle trailer, and \$.0020 for the larger rig case. These factors are illustrated as the slope of each line, and the slope is directly dependent upon the fuel mileage of each rig and the payload. The larger engine configuration with the lowest fuel mileage and not the largest payload has the steepest slope, indicating that it is most affected by increases in fuel prices. As fuel price rises, the 3-axle case is the most efficient at maintaining a lower ton-mile cost, indicated by having the most gradual slope, due to its maximum payload and moderate fuel mileage.

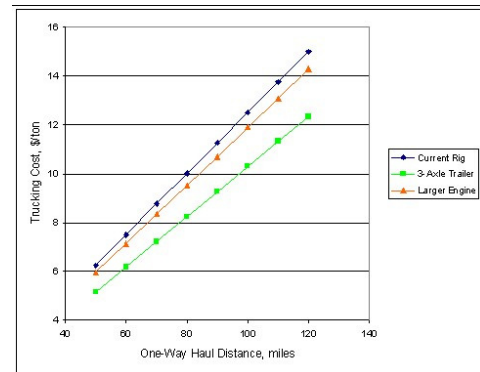


Fig. 2: Trucking cost per ton as affected by one-way haul distance.

Haul distance also directly impacts trucking costs (Fig. 2). Log trucking costs are commonly quoted on a cost per ton-mile basis, with a minimum haul distance of 30-50 miles, to account for the fixed times while loading in the woods and unloading at the mill. Beyond a minimum haul distance, as haul distance increases, the cost per ton increases. However, the cost advantage enjoyed by the higher GVW rigs is even larger as haul distance increases.

Trucking of raw forest products in the U.S. South does not enjoy GVW or payloads similar to those of our competitors in other parts of the world, where GVWs of 50-60 metric tons (110,000-132,000 pounds) may be allowed. If the U.S. were to permit a 97,000-pound GVW on major highways, significant cost savings could be available to log truckers if they modified their rigs to take advantage of these possibilities. Trucking cost reductions of up to 18% appear to be available if contractors can replace their 2-axle trailers with 3-axle trailers and continue to use their existing current tractor unit.

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