



FREIGHT POLICY TRANSPORTATION INSITUTE



The Critical Status of
Agricultural Transportation
in the Pacific Northwest

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FPTI Research Report Number 6

By

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FPTI Research Reports: Background and Purpose

This is the sixth of a series of reports prepared by the Freight Policy Transportation Institute (FPTI). The reports prepared as part of this Institute provide information to help advance knowledge and analytics in the area of transportation policy.

FPTI is funded by the United States Department of Transportation (USDOT). Dr. Ken Casavant of Washington State University is Director of the Institute. A Technical Advisory Committee (TAC) comprised of Federal, State and local representatives has been assembled in order to identify relevant and pressing issues for analysis, apply rigorous theoretical and analytical techniques and evaluate results and reports. The TAC includes Jerry Lenzi (WSDOT) as Chair, Ed Strocko (USDOT), Carol Swerdloff (USDOT), Bruce Blanton (USDA), Timothy Lynch (American Trucking Association), Rand Rogers (MARAD), John Gray (AAR) and Daniel Mathis (FHWA – Washington State). The following are key goals and objectives for the Freight Policy Transportation Institute:

- Improve understanding of the importance of efficient and effective freight transportation to both the regional and national economy
- Address the need for improved intermodal freight transportation, as well as policies and actions that can be implemented to lower operating costs, increase safety and lower environmental impacts of freight transportation nationwide
- Improve freight transportation performance to specific industries and sectors of the economy

For additional information about the Freight Policy Transportation Institute or this report, please contact Ken Casavant at the following address:

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FPTI PREVIOUS REPORTS NOW AVAILABLE

1. Simmons, Sara and Ken Casavant. FPTI Research Report #1. "Historical Waterborne Commerce on the Columbia-Snake River System: Commodity Movements Up and Down River, 1991-2010." November 2010.
2. Simmons, Sara and Ken Casavant. FPTI Research Report #2. "Industry Preparations for the Columbia-Snake River Extended Lock Outage, July – December 2010." February 2011.
3. Khachatryan, Hayk, Jeff Poireman, and Ken Casavant. FPTI Research Report #3. "Determinants of Consumer Choice for Biofuels." March 2011.
4. Khachatryan, Hayk, Ken Casavant, Eric Jessup, Jie Chen, Shulin Chen, and Craig Frear. FPTI Research Report #4. "Biomass Inventory Technology and Economics Assessment." March 2011.
5. Khachatryan, Hayk and Ken Casavant. FPTI Research Report #5. "Spatial and Temporal Differences in Price-Elasticity of Demand for Biofuels." March 2011.

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The U.S. Department of Agriculture and the U.S. Department of Transportation recently completed a comprehensive report on agricultural transportation in the United States. Washington State University's Transportation Group (TRG) in the School of Economic Sciences was asked to partner in conducting that national study. The report reviews transportation and its effect on rural communities, with an emphasis on agricultural transportation. It looks in depth into each of the four major modes of transportation commonly used by agriculture in the United States: trucking, railroads, barges and ocean vessels. It examines each in the light of its ability to meet rural America's transportation needs now and in the future. It identifies some broad issues that merit attention from policy makers. The link for the study is: www.ams.usda.gov/RuralTransportationStudy

This series of articles in *Wheat Life* will extract from that report and detail some findings of that study, with emphasis on the issues and concerns of Washington and the Pacific Northwest producers pertaining to the need for efficient and competitive transportation. In this lead article the overall findings will be identified, with specific detail provided in subsequent articles.

Some Known Facts about Agriculture and Transportation

Transportation is critical to U.S. agriculture, which raises the food for America and feeds a hungry world with its abundance. Our transportation system moves food from farms to our tables and to ports for export to foreign markets. The four major modes work together in a seamless network, cooperating and competing with one another in a balanced and flexible system that delivers products efficiently and economically in an ever-changing market.

Agriculture is the largest user of freight transportation in the United States, claiming 31 percent of all ton-miles transported in the United States in 2007. Much of this freight travels out of the country. Global agricultural supply and demand have changed rapidly since 1990. Corn and soybeans have increased dramatically in both consumption and production. During the past five years, half of American wheat was exported (almost 90 percent in the state of Washington), along with 36 percent of the soybean crop and 19 percent of the corn crop. These exports travel from the inland areas of the United States and the Pacific Northwest where they are produced, to borders and ports by way of a network of

trucks, trains and barges. The need for agricultural transportation will continue to increase, based on projected sustained growth in the demand for U.S. agricultural products domestically and overseas.

Transportation Supports Rural America

An effective transportation system supports rural economies, reducing the prices farmers pay for inputs, such as seed and fertilizer, raising the value of their crops, and greatly increasing their market access. The economies of rural areas are intertwined. As agriculture thrives, so does its supporting community. Providing effective transportation for a rural region stimulates the farms and businesses served, improving the standard of living. The interaction of agriculture and the off-farm jobs it supports provides a solid base for rural communities. Agriculture is far from the largest employer in rural America. Four other sectors—services, government, retail and wholesale trade, and manufacturing—comprise 80 percent of rural employment. Agriculture is responsible for less than one in ten rural jobs but, because it is so capital-intensive, it generates much more economic activity in the community than just the jobs it creates.

The transportation system that contributes to the success of agriculture also supports rural manufacturing. Although the traditional view of rural America is agricultural, it is, in fact, manufacturing that is critical. Manufacturing employs 15 percent of the rural workforce. As a share of total employment, manufacturing is 42 percent more important to rural America than to metropolitan America. The availability of rail, air and highway services is one of the most commonly cited requirements of manufacturing and commercial establishments.

Transportation Issues Affecting Agricultural Shippers

The study addressed various issues in agricultural transportation in fifteen chapters. Some of the major policy findings presented to Congress, to be examined in more detail in following articles, were:

- Transportation needs should be viewed from a system standpoint. Current Surface Transportation Board (STB) governance oversees each mode of transportation—trucks, railroads, barges and ocean vessels—separately and disparately rather than as a single interlocking system of transportation. The U.S. agricultural supply chain is a major user of the nation's transportation system, so its needs, especially in rural areas, should be taken into account in the planning and oversight of transportation in the United States.

Agricultural shippers pay most of the transportation costs and frequently have limited transportation options, because they are generally price takers in the transportation market.



Grain train approaching Winona, Wash.

BRUCE KELLY PHOTO

- Ocean shipping and railroads are exempt from many antitrust rules. These exemptions have the potential and appear to decrease competition, reduce service and raise rates. However, since each of these industries cooperate as part of a network (although in different ways), carriers believe the limited antitrust exemptions have facilitated this cooperation.

- The rapid consolidation of the railroad industry through mergers has resulted in a decrease in the unrestricted interchange of traffic, routing choices and the level of competition among railroads. Shippers are concerned with switching limitations, restricted interchange, paper barriers, inconsistent service, high rates, excessive fuel surcharges, bottleneck rates and the effectiveness of the rate challenge process.

However, railroad productivity has increased greatly since deregulation in 1981, and rates have fallen for many shippers, although to a lesser degree for grain and coal shippers. Much of this increased productivity came about at the expense of shippers, with rail line abandonment, shippers having to invest in private cars, increased accessorial rates to the shipper, etc. At the same time, the financial health of the rail industry has improved, benefiting farmers and rural areas to some degree.

- In 2005, Congress clarified the 100 air-mile radius agricultural exemption from the hours of service rules, first granted in 1995. It means that drivers transporting an agricultural commodity or farm supplies for agricultural purposes are exempt from the maximum driving and on-duty time provisions required of long-haul drivers. The agricultural exemption is important because of agriculture's unique requirements. Some questions still remain about the impact on safety.

- Funding for new waterway projects is nearly depleted, and there is a growing funding gap to finance ongoing projects. Critical improvements to the waterways, such as the new major lock reconstruction on the Columbia-Snake River, may not be available in the future. A consensus on the best way to tackle these funding issues is needed.

The authors of the report offer the following conclusions:

The supply chain for agricultural products often depends on multiple modes of transportation, each with its own price dynamics and relative fuel efficiencies. In grain transportation, fuel costs have the greatest impact on truck and rail rates, followed by ocean and barge.

Agricultural shippers pay most of the transportation costs and frequently have limited transportation options, because they are generally price takers in the transportation market. Transportation costs directly affect their incomes and access to destination markets.

Long-term economic trends indicate growing demand for freight transportation services, the largest user of which is the U.S. food and agriculture sector. To keep the U.S. economy competitive in the global economy and ensure that the transportation share of domestic food prices remains reasonable, transportation planning and investing needs to shift from its mode centric approach to a supply-chain, multimodal, systems approach. Although each mode has its own characteristics, they interrelate to form an integrated system. Some policies need to address mode-specific issues, such as anti-trust exemption status and carrier practices related to rates and services; others can be directed at improving cargo flow by identifying remedies to network choke points. ■