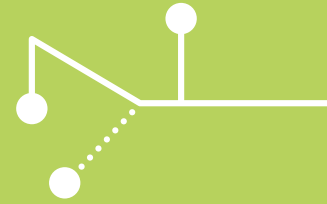


Fertilizer Logistics and Transportation



Issue Summary

Fertilizer is a global commodity. In addition to ports, fertilizer moves by rail, truck, barge, and pipeline. America's farmers and their suppliers rely on a safe and efficient transportation network for their success.

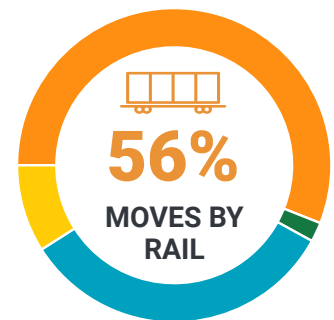
Fertilizer Logistics




Fertilizer moves year-round. Although there is a two- to three-week window when most crops are planted and fertilized, continuous production and transportation to storage locations throughout the year is necessary to ensure sufficient supplies to meet the Spring demand. While the timeliness of shipments is more sensitive in the Spring planting season, the volume of shipments is virtually the same each quarter of the year. The transportation of fertilizer from producer to storage to farmer can involve truck, barge, pipeline, rail or some combination of two or more modes.

Modal Shift

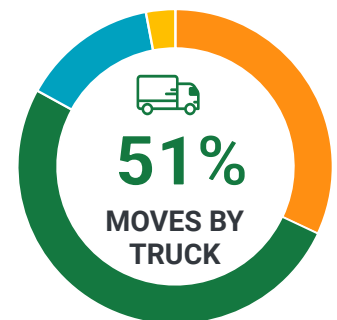
Between 1997 and 2012, the volume of ammonia shipped by rail was relatively flat and declined slightly while volumes shipped by truck increased substantially. In terms of total tonnage moved between 1997 and 2012, rail volumes declined 12 percent while truck volumes increased 38 percent. The average distance shipped by truck also increased substantially from 49 miles to 129 miles (163% increase). The primary cause of this change are challenges facing ammonia rail shippers; i.e., steep rate increases, deteriorating service, and regulatory uncertainties.




In terms of ton-miles:



-  **33%** MOVES BY BARGE
-  **9%** MOVES BY PIPELINE
-  **2%** MOVES BY TRUCK

In terms of total tonnage:



-  **32%** MOVES BY RAIL
-  **14%** MOVES BY BARGE
-  **3%** MOVES BY PIPELINE

Rail Transportation



An efficient and competitive freight rail system is essential to farmers and the fertilizer industry. But four major railroads handle over 90% of this traffic, and two-thirds of rail stations are served by just one of these railroads. The lack of competitive rail options gives railroads substantial power to dictate rail pricing and service levels. Since 2000, freight rail rates generally have risen more than 30% while railroad costs increased only 3%. By shifting costs to rail customers, railroad profits per ton-mile have gone up 186%. From 2005 to 2017, rail rates for carloads of anhydrous ammonia, the building block of all nitrogen fertilizers and one of the most efficient sources of nitrogen for farmers, increased 206%, over three times more than the increase in the system-wide average rail rate per car.

The Surface Transportation Board (STB) is the primary regulatory agency responsible for rail rate and service matters. Practical regulatory reforms that improve STB oversight of the rail marketplace are needed. STB modernization can help promote competitive freight rail service.

Surface Transportation



The fertilizer industry relies on commercial drivers for “just in time” delivery to their farmer customers. Trucking capacity is a serious challenge, and is anticipated to tighten as many drivers retire in the coming years. Hours of service (HOS) also constrains capacity and the distance that trucks can effectively service. Capacity can be improved through regulatory reform and efficiency gains. For example, the current Gross Vehicle Weight (GVW) limit for Federal Interstate Highways of 80,000 lbs. on 5 axles is outdated. Modernizing weight restrictions for 6-axle trucks would make U.S. farmers and businesses more competitive and reduce the number of trucks needed to haul the same amount of goods, thus reducing infrastructure wear-and-tear and enhancing trucking capacity. Expansion and simplification of HOS agricultural exemptions is also warranted.

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Major railroads handle over 90% of traffic

30%

Rise in freight rail rates since 2000, while railroad costs increased by only

3%

186%

Increase in railroad profits per ton-mile

80,000 lbs.

Current and outdated Gross Vehicle Weight limit for Federal Interstate Highways on 5 axles

Waterways



Exports of agricultural goods comprise 20 percent of farm income and support more than 1 million jobs. Our nation's locks and dams are in urgent need of maintenance and modernization. Most locks and dams were built in the 1920s and 1930s and have far exceeded their 50-year design lifespan. In the past decade, there has been a 700 percent increase in unscheduled stoppages for repairs.

20%

of farm income comes from exports of agricultural goods and support more than

1 million jobs

Pipelines



The U.S. pipeline system in the United States is critical to fertilizer manufacturers. Currently there are three ammonia pipelines in the United States. Manufacturers utilize pipelines to transport anhydrous ammonia from production facilities to high-utilization regions in the corn belt and from the Port of Tampa to phosphate production facilities in Florida. Ammonia production facilities also utilize substantial volumes of industrial natural gas for power and as a feedstock for ammonia production. In 2018, U.S. nitrogen producers used an estimated 600 billion cubic feet of natural gas. That accounts for 2 percent of total U.S. natural gas consumption and 7 percent of industrial use.

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Ammonia pipelines in the U.S.

600 Billion

Cubic feet of natural gas used by U.S. nitrogen producers in 2018, or

2%

Of total U.S. natural gas consumption

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