**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. In 2017, 88.9 million tons of fertilizer was transported in the United States from supply sources to end users.

**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 during application periods. 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.

* In terms of ton-miles:
  + 63% moves by rail
  + 15% moves by truck
  + 17% moves by barge
  + 5% moves by pipeline
    - Over half of all fertilizer moves by rail (63%)
    - Almost one-fifth of all fertilizer moves by barge (17%)
    - About two-thirds of all ammonia shipments move by pipeline (60%)[[1]](#footnote-1)
* In terms of total tonnage:
  + 37% moves by rail
  + 51% moves by truck
  + 9% moves by barge
  + 3% moves by pipeline
    - All fertilizer utilized by farmers touches a truck at least once
    - In 2017, 45.8 million tons moved by truck (51%)
* Modal shift: Between 2012 and 2017, total ton-miles decreased by 7% from 54.2 billion to 50.2 billion. There were significant changes within the modes due to volume shifts associated with increased U.S. production of fertilizers for nitrogen products, including new production being located closer to end users. Total ton-miles for barge declined 16% and pipeline ton-miles declined by 5%. Both truck and rail increased ton-miles by 3%.[[2]](#footnote-2) Rising domestic production contributed to lower reliance on barge movements, which is a mode also heavily utilized for imports of fertilizer products. Rising domestic production has reduced fertilizer imports.

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**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, rail carriers have been shifting costs to rail customers. 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. Since 2017, severe rail carrier cost-cutting decisions have made rail service unreasonably poor.

Congress should work with the Surface Transportation Board (STB) to clarify that reasonable rail service standards are part of the common carrier obligation (CCO). The STB is the primary regulatory agency responsible for rail rate and service matters. In addition to the CCO, 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. The vaccine mandate on Canadian truckers should be eliminated. Driver apprenticeship programs should be promoted. Hours of service (HOS) regulations should be streamlined and reformed. Capacity can also be improved through efficiency gains. For example, the current Gross Vehicle Weight (GVW) limit for Federal Interstate Highways of 80,000 lbs. on 5 axles was established in 1982, prior to the standardization of anti-lock brakes and other roadway safety improvements. Outdated weight restrictions make U.S. farmers and businesses less competitive and requires MORE trucks to travel on roadways to haul the same amount of goods, making matters worse for infrastructure wear-and-tear and trucking capacity (driver shortage).

**Waterways:** One-fifth of fertilizer movements rely on inland navigation while 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.

**Pipelines:** The U.S. pipeline system in the United States is critical to fertilizer manufacturers. Currently there are two 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.

1. Only finished ammonia moves by pipeline; unfinished slurry phosphate rock not included [↑](#footnote-ref-1)
2. Total tonnage from 2012-2017 for ammonia shows a decrease of 3% modal share for rail and 3% increase in the modal share for truck. This reflects market and regulatory pressures facing ammonia rail shippers. [↑](#footnote-ref-2)