

Fertilizer Market Overview and Challenges

Issue Summary: Fertilizer is responsible for 50% of crop yields, hence its critical role in world food security. A confluence of factors has negatively impacted fertilizer markets, which are global. These challenges have constrained supply, shifted trade flows, and increased the cost that farmers pay for this essential crop input.

Issue Background: Fertilizer is a globally traded commodity that is influenced by global supply and demand factors, as well as domestic conditions. Because fertilizer is resource-dependent, relying for example on natural gas and mineral deposits of potash and phosphate, only about 65 nations have the resources necessary for its production. Competition here at home is significant: the United States is one of only three nations with 20 or more unique producers of fertilizer. We also import many types of fertilizers in significant volumes. Because the fertilizer industry is globally intertwined supply disruptions caused by increasing energy prices, foreign trade policies and geopolitical events (Belarus, China, Russia-Ukraine) can affect price and supply conditions in the United States. Consequently, a combination of events over the last two years have resulted in fertilizer input cost increases.

A more detailed overview of the fertilizer business and factors impacting it is available from [TFI's comments](#) responding to the U.S. Department of Agriculture's (USDA) [request for information](#) on "Fertilizer Access." The following key factors are influencing fertilizer markets.

Key Factors

- **Resource dependent:** Only about 65 nations have the resources to produce fertilizer.
- **Domestic competition:** The United States is one of only three nations with 20 or more unique producers of fertilizers.
- **Capital intensive:** Fertilizer production facilities cost \$1 billion to \$4 billion to build.
- **Global demand:** As farmers increase crop production to capture additional revenue from high or increasing crop prices, additional acreage is brought into production, and this raises the demand for fertilizer.
- **Global supply disruptions:** Sanctions, export restrictions, and other factors have drastically impacted major global producers and suppliers in Belarus, China, Russia-Ukraine, and much of Europe.
- **Production costs:** Natural gas accounts for 70% to 90% of total ammonia production costs. Natural gas prices doubled in the United States in 2021.
- **Logistical supply chain:** Shipping costs have been rising for many years. Poor rail service is also raising costs and further constraining the entire modal supply chain. The vaccine mandate on transporters of essential commerce has also raised costs and constrained supply on the U.S.-Canadian border.