

July 15, 2022

Jaina Nian  
Agricultural Marketing Service  
United States Department of Agriculture  
Room 2055-S  
STOP 0201  
1400 Independence Avenue SW  
Washington, DC 20250-0201

Re: Access to Fertilizer: Competition and Supply Chain Concerns (AMS-AMS-22-0027-0001)

Dear Ms. Nian:

The American Farm Bureau Federation is the nation's largest general farm organization. We have members in all 50 states and Puerto Rico who are engaged in all facets of agriculture. In almost every aspect of agriculture, fertilizer serves as a key component in producing food, fuel, and fiber to feed and clothe consumers around the world. We appreciate USDA's attention to the current fertilizer supply issues and value the opportunity to comment on USDA's Request for Information (RFI) on Access to Fertilizer: Competition and Supply Chain Concerns (AMS-AMS-22-0027-0001).

As USDA pointed out in the RFI, farmers depend on nitrogen, phosphate, and potassium (potash), which are key nutrients in manufactured fertilizer. Several factors have contributed to this supply chain failure leading to shortages and continually increasing costs of fertilizer. These factors include the ongoing conflict between Russia and Ukraine, rising inflation, labor shortages, regulatory hurdles, and increased transportation costs following the production disruptions experienced throughout COVID-19 shutdowns. As USDA looks to invest funds to alleviate the current fertilizer supply issues, it should consider equipping farmers to better manage price risk by enabling them to add or expand on-farm fertilizer storage capacity and other on-farm storage investments that can help them manage input costs throughout the year.

AFBF is pleased to provide responses to several of USDA's prompts and to provide some general feedback regarding how to spur domestic fertilizer production and alleviate price concerns.

Question 2 asks for "comment on both long and short-term trends in fertilizer prices. What role have fertilizer, crop prices, or availability of key raw materials and manufacturing played in any changes? Has price volatility increased and if so, what accounts for this increase in volatility? Please comment on any trends and the relationship of fertilizer prices to prices of relevant crops, such as corn and soybeans."

AFBF analysis has found that all major nutrients used in the production of primary row crops in the U.S. – nitrogen (in the forms of anhydrous ammonia, urea, or liquid nitrogen), phosphorus

(diammonium phosphate – DAP and monoammonium phosphate – MAP) and potassium (potash) – have experienced varying degrees of upward price pressure.

Compared to January 2021 prices, ammonia has increased over 229%, liquid nitrogen has increased over 221%, urea is up 140%, and MAP has increased 98%, while DAP is up over 118% and potash has risen above 133%. USDA ERS is projecting that fertilizer prices will fall 4% in 2023 compared to 2022, but that follows a 62% in 2022 over 2021. On net, this would mean that between 2017 and 2023, fertilizer prices for every major field crop in the U.S. will have increased by approximately 50%.

Demand for relevant crops globally has increased as Russia's recent military action in Ukraine significantly increased the uncertainty of agricultural supply and demand conditions in the region and well beyond. With these most recent events, there is increased pressure on all the other commodity-producing countries to deliver all of, if not more than, the expected production in 2022 to make up for any potential production lost and cut off from the market in Ukraine and Russia.

Fertilizer is a global commodity and two-thirds of global fertilizer demand is driven primarily by six crops. Globally, corn represents about 16% of the farm-use fertilizer demand, with wheat a close second, representing about 15% of global farm-use fertilizer demand. Rice represents about 14% of global farm-use fertilizer demand, followed by vegetables at 9%, fruits at 7% and soybeans at 5%. Corn represents about 49% of the share of U.S. fertilizer nutrient use, while wheat accounts for about 11% and soybeans account for 10%.

The impact of high fertilizer prices is evident in the 2022 June Acreage Report. U.S. farmers planted 88.3 million acres of soybeans, which is an increase of 1% compared to 2021 after a 4.6% increase from 2020 to 2021. They also planted 89.9 million acres of corn, a decrease of 4% compared to 2021. In the June Acreage Report USDA also indicated that a special follow-up survey will be carried out due to the significant number of acres, 4 million in corn and 15.8 million in soybeans, left to be planted, per farmers' stated intentions in March. This indicates an implied shift that U.S. farmers are pulling back corn acres and planting them into soybeans, a direct impact of the high cost of fertilizer and the increased cost of other inputs.

Question 7 asks "How do transportation and delivery affect fertilizer competition and access to fertilizer? For instance, the U.S. receives imports of fertilizer derivatives through the Gulf of Mexico, and ships fertilizer product up the Mississippi River. To what extent does market power by fertilizer or applicable firms over these or other key transportation channels affect competition and farmer's access to fertilizer? What risks relating to supply chain, labor or other disruptions are most relevant?"

Fertilizer is a global commodity and can be influenced by multiple market factors beyond the control of U.S. producers. Similar to globally traded commodities, 44% of all fertilizer materials are exported to a different country than where they were produced. This factor has an outsized impact on fertilizer prices because fertilizer production is not only influenced by what is occurring where it is produced or the cost of production in that country, but also affected by the

numerous other countries demanding fertilizer products and the transportation rates to get the fertilizer to its final destination.

The war in Ukraine combined with weather challenges in South America and ongoing COVID and supply chain issues has created a ripple effect for food and agricultural systems across the world. It is imperative that the United States does everything it can to provide timely humanitarian relief, alleviate supply chain challenges and maximize the ability of U.S. farmers, processors, and input suppliers to ensure global access to feed and food during this critical time. Since these disruptions are unlikely to abate in the short term, public policy must also clear hurdles that could stand in the way of a successful crop year 2023.

Although not all of the potential solutions are within USDA's jurisdiction, USDA can serve as advocate across the federal government to ensure policies do not negatively impact agricultural supply chains or diminish access to critically needed agricultural inputs like fertilizer. USDA should work with respective agencies on the following items:

- Eliminate the cross-border vaccine mandate between the U.S. and Canada and urge the Canadian government to do the same. The U.S. receives 80%-85% of our imported potash fertilizer from Canada and this restriction is hampering those crucial crop nutrients from getting to growers in the U.S. Approximately one-third of cross-border drivers have been removed from the supply chain, at a time with heightened demand.
- Immediately modernize weight restrictions for 6-axle trucks by taking emergency actions that allow federal gross vehicle weight limits to exceed 80,000 pounds on a temporary basis. This would make U.S. farmers and businesses more competitive and reduce the number of trucks needed to haul the same amount of goods. The U.S. Department of Transportation (DOT) implementing this change would reduce infrastructure wear and tear, enhance capacity, and benefit the environment by reducing vehicle miles traveled. It would also mitigate the current driver shortage, which is particularly pronounced in rural agricultural areas. This could be achieved via a federal emergency declaration under the Stafford Act.
- Eliminate hours of service (HOS) restrictions on agricultural commodity and farm supply shipments. Fertilizer is delivered in a just-in-time system and there is a small window where fertilizer is applied. With labor shortages and massive amounts of fertilizer moving in a short window, drivers must have the flexibility to work throughout this crucial time.
- Enact rail reforms and oversight that will provide service levels to ensure the continued movement of agricultural and food commodities for both domestic and international uses related to human and animal feed and biofuels. The Surface Transportation Board should pursue regulatory reforms that promote rail competition, fair rail rates and reliable service.

Question 8 asks for comment “on the U.S. agricultural system's reliance on foreign supply of some fertilizers and global supply chain risks that could result from trade disruptions. Please comment on how the conflict in Ukraine may be impacting fertilizer markets. If other supply

chain or trade disruptions have been experienced, please describe the effects and challenges in dealing with such events. Would greater availability of domestic or North American options mitigate risks? Would reducing dependence on suppliers from any one country or region mitigate risks? What tools might be deployed to achieve those ends?"

The U.S. is the third-largest producer of fertilizer globally; however, it still requires the importation of all three nutrients, especially nitrogen and potash, to fully meet demand. This means that U.S. fertilizer dealers and U.S. producers are required to pay the price defined by the global market for fertilizer and fertilizer materials, plus transportation. In addition, anti-dumping tariffs and countervailing duties have been applied to U.S. imports of phosphate and UAN, which has added to the increased cost of fertilizer.

In 2020, U.S. ammonia was produced at 36 domestic plants, up from 22 plants producing in 2008, and shipped around the country by pipeline, rail, barge and truck. According to the most recent data from the International Fertilizer Association, in 2018 the U.S. ranked second in nitrogen production, representing 11.6% of global production, behind China, which produced 24.6% of nitrogen, and ahead of India, which is the third-largest global producer of nitrogen, producing 11.3% of global supply. For phosphate production, the U.S. also ranked second, with 9.9% of global production, behind China, which produced 37.7%, and again ahead of India, with 9.8% of the global supply of phosphate. For potassium potash, Canada leads the way in production, representing 31.9% of global production, followed by Belarus, which produces 16.5% of global supply. Russia is a close third as it produces 16.1% of potassium global supply. China ranks fourth. In total, about 80% of the world's potash comes from those four countries. The U.S. ranks as low as 11<sup>th</sup> in potassium production, with only 0.8% of global supply coming from the U.S.

When it comes to global exports, the U.S. is not a major fertilizer exporter. The U.S. holds a share of about 4.6% of the nitrogen exports, ranking seventh. Russia is first, with a share of 16.5% of exported nitrogen, followed by China with about 11.2% of share in nitrogen exports, and Saudi Arabia, which holds a share of 6.4% of nitrogen exports.

Of phosphate exports, the fourth-ranked U.S. represents about 11.8%. China is first in phosphate exports, holding a share of 25.2% of global phosphate exports, followed by Morocco with a share of 17.4%, and Russia with a share of 12.7%. Of the global potassium exports, the U.S. represents less than 1% of global exports and ranks 12<sup>th</sup> among other countries. Canada holds the largest share of global potassium exports with 36.2%, followed by Belarus with an export share of 18.5% and Russia, which represents 16.5% of global potassium exports.

Along with increased shipping rates for the 44% of fertilizer that is exported across the world, anti-dumping trade dispute cases were increasing fertilizer costs even before Russia invaded Ukraine. In 2019, U.S. imports of phosphate fertilizer materials from Morocco and Russia peaked at 2.9 MMT. Then, the anti-dumping case was filed against those countries. Mosaic, the largest U.S. producer of phosphate, won the anti-dumping case and a 30% tariff was applied to phosphate imports. By 2021, combined imports from Morocco and Russia had fallen to 364 thousand metric tons, a decline of 87% from 2019. CF Industries, the largest U.S. producer of

liquid nitrogen (Urea Ammonium Nitrate), applied a similar case to Russia and Trinidad and Tobago regarding liquid UAN. Russia and Trinidad and Tobago combined account for approximately 79% of UAN imports. The proposed application of anti-dumping margins between 169.96% and 391.65% for Russia and 158.81% for Trinidad and Tobago, and countervailing duties, will add to the production costs for many important agricultural commodities. Purchases have shifted to other countries, so U.S. imports of ammonia and phosphate are now arriving from countries like Saudi Arabia, Jordan, Australia, Mexico, Lithuania and Egypt. This shift is in search of other imports that are more likely to arrive at a price lower than an applied tariff rate but are likely still to be slightly higher than the going global price due to applied transit costs.

Other trade disruptions have played a big role in fertilizer availability and cost. Sanctions from the European Union have been applied to Belarus, and the U.S. has followed the same process to apply sanctions. As Belarus contributes about 20% of global potash exports, these sanctions have slowed and even stopped shipments of potash to the EU and the U.S. These sanctions are also discouraging other countries from buying from Belarus, forcing an overall lessened contribution of global potash supply.

At the end of September, China applied an export ban on phosphate due to rising costs of production and domestic use. With China accounting for 25% of phosphate fertilizer exports globally, this export ban puts even more pressure on prices. There is potential for China to also apply an export ban to urea; China contributes about a 10% share of global urea exports.

In question 10, USDA inquires “what obstacles exist to the financing and development of new fertilizer capacity that would enhance the competitiveness of fertilizer markets? Would new or expanded domestic manufacturing, mining, processing, or alternative fertilizer production capacity help promote access to and affordability of fertilizer for agricultural producers? Are there existing “shovel ready” manufacturing, mining, or other processes that could or should be adjusted to facilitate new fertilizer production? Are there other potential new entrants in the near or medium-term? How might USDA best support investment in new fertilizer capacity in the U.S.?”

Given the limitations of USDA’s two recent \$250 million each (\$500 million total) announcements, AFBF finds those funds would be best suited to go directly to producers to assist them with increasing on-farm storage capacity and help them better hedge future fertilizer price risk. However, in response to this specific question, AFBF urges USDA to work alongside other federal agencies to remove regulatory barriers to domestic fertilizer production to increase domestic output. USDA is well-positioned to serve as an advocate for farmers and rural economies across the federal government in making simple reforms that would spur additional fertilizer production.

- USDA should urge responsible agencies including EPA and the Fish and Wildlife Service and National Oceanic and Atmospheric Administration to seek reforms to environmental review processes that currently prohibit growth in domestic fertilizer production. Specifically, recently proposed revisions to the National Environmental Policy Act will

contribute to the uncertainty and further delay the already lengthy federal permitting process.

- USDA should advocate for potash and phosphate to be included on the Critical Minerals List. Historically, potash has been included but was recently removed. USDA should urge the U.S. Geological Survey to include phosphate rock as a critical mineral to allow for a streamlined and reliable permitting process, which in turn will increase the domestic supply of fertilizer.

Question 14 asks “In what other ways can USDA support farmers' ability to adapt to variability in fertilizer costs? How might USDA assist small producers in hedging or otherwise mitigating sudden, unexpected jumps in the spot price of fertilizer? How might USDA better support modes of production that rely less on fertilizer, or support access to markets that may pay a premium for products relying on less fertilizer? How can USDA further facilitate appropriate conservation of land, and/or support farmers' flexibility in starting up and sustaining other farm enterprises?”

While many of the issues AFBF has identified as contributing to the fertilizer supply shortage and increased costs cannot be immediately remedied using USDA's \$500 million investments, AFBF members have identified barriers to access and increased on-farm storage for fertilizer as preventing them from hedging or mitigating sudden unexpected jumps in the spot price of fertilizer. Considering this, USDA should use these investments to create a program that provides grant funding and/or guaranteed loan financing to agricultural producers and rural small businesses to add to or expand on-farm fertilizer storage capacity. Agricultural producers may also apply for new fertilizer and alternative fertilizer, such as organic manure, application equipment grants and loans to also reduce the input costs of machinery that could precisely apply fertilizer and alternative fertilizers into the soils. This would include equipment used by custom applicators such as agitators, pumps, injectors and dragline equipment.

These grant loans should also be made available retroactively to January 1, 2021, so that proactive investments made to supply alternatives or hedge against rising fertilizer prices can be reimbursed.

This program should be available to agricultural producers with at least 50% of their gross income coming from agricultural operations and small businesses in eligible rural areas, including custom applicators. USDA should provide combined grant and loan guarantee funding up to 95% of total eligible project costs. A program like this would allow producers to purchase additional fertilizer when they are able to hedge against potential fertilizer price increases. As the geopolitical landscape impacting fertilizer production and trade is unlikely to improve in the near future, it is imperative farmers have the tools they need to appropriately minimize the impact of price changes.

AFBF recognizes that some stakeholders may have required additional time to provide thorough answers to these prompts. However, the increase in fertilizer prices is an issue that needs immediate attention. AFBF notes that deploying grant funding to increase storage would have more impact on this growing problem had USDA developed and deployed grant funding expediently. Considering the time-sensitive nature of this problem, AFBF urges USDA to work

quickly to ensure this program has the optimum impact on American food, fuel, and fiber production.

Farmers are extremely concerned with the price pressures facing them in 2022 and beyond as our world supply of the critical components needed to produce fertilizer becomes more challenging and costly to obtain. Considering the myriad of factors outside of the purview of the U.S. government impacting fertilizer supply, it is imperative all federal agencies examine ways regulations can be altered to incentivize domestic fertilizer production while enabling farmers to proactively minimize their price risk through storage. As USDA considers its role in mitigating fertilizer supply chain shortages, USDA must serve as an advocate for farmers in removing barriers that stand in the way of improved access to fertilizer. AFBF appreciates USDA's recognition of the need to alleviate these fertilizer supply chain constraints and urges the use of USDA's dollars to equip farmers with tools that provide tailored price mitigation strategies, like storage facilities.

Sincerely,

A handwritten signature in black ink, appearing to read "Sam Kieffer". The signature is fluid and cursive, with a long horizontal stroke at the end.

Sam Kieffer  
Vice President, Public Policy