

FERTILIZERS ARE CRITICAL MINERALS

Department of Interior Briefing

May 9, 2025



INTRODUCTIONS

The Fertilizer Institute

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J.R. Simplot Company

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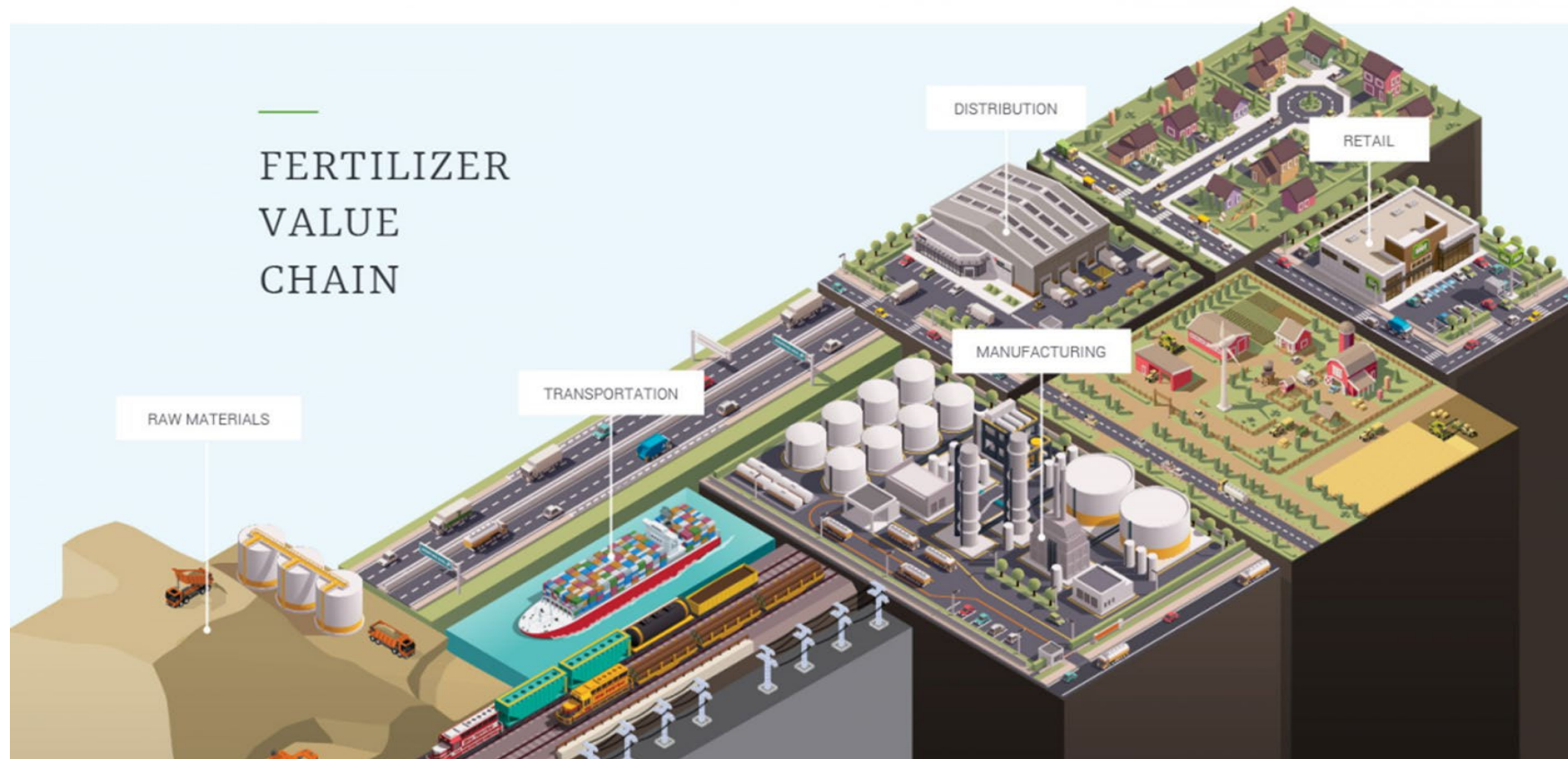
Nutrien

- › Connor Hamburg

The Mosaic Company

- › Kasey Gillette

Represent 249 member companies from fertilizer manufacturing, wholesale, transportation, to retail



OVERVIEW

History of Phosphate (P) and Potash (K) and Critical Minerals:

- Potash included in first Trump Administration's Critical Minerals list in 2018 but removed by Biden Administration in 2022.
- Phosphate just missed the threshold for inclusion in the 2018 and 2022 lists, but important factors were not considered.
- Focus today on phosphate designation

DOI authority

- E.O.: "Immediate Measures to Increase American Mineral Production"
 - Potash included along with critical minerals
 - ***Sec. Burgum can add phosphate to the E.O. at his discretion (permitting and PG reuse)***
- 2025 Critical Minerals list
 - ***At any time, DOI can add phosphate as a critical mineral including the list due in 2025.***

IMPORTANCE OF LISTING P AS CRITICAL MINERAL

Permit streamlining, future policy decisions (E.O., legislation, regulatory), tax incentives:

- **Fertilizer**
 - › Responsible for 50% of food supply
 - › Food security = national security
 - › Ensures domestic fertilizer supply for U.S. growers
- **Fire suppression**
- **Feed additive**
- **Water treatment**
- **Batteries (LiFePO₄ or LFP)**
- **Pharmaceuticals**

EFFORTS TO RECOGNIZE P & K AS CRITICAL MINERALS

- 119th Congress – H.R. 4059 and S. 3956 directing USGS to list P and K (bipartisan support)
- TFI provided testimony before House Natural Resources Subcommittee in support of inclusion in 2024.
- Chair and Ranking member of Senate Committee on Armed Services (SASC) waived jurisdiction for inclusion in National Defense Authorization Act (NDAA) managers package, but was ultimately removed by Senator Schumer
- Appropriations report language (bill did not pass)

In Support of H.R. 4059 & S. 3956

To Include Phosphate and Potash on the
Final List of Critical Minerals of Department
of Interior

OVERVIEW

Both phosphate and potash meet the critical mineral definition included in The Energy Act of 2020 related to national security, supply chain vulnerabilities, and the mineral serves an essential function to agriculture. However, neither mineral was included in the Department of Interior's 2020-2022 list of critical minerals. Potash was included in the 2018 list, but phosphate was again absent. Likely due to the second criterion.

But as we have seen with China's exports of phosphate fertilizers accounting for 30% of all globally exported processed phosphates and Russia's phosphate market equating 30% of the market, the phosphate fertilizer market is susceptible to supply shocks.

Similarly for potash, 40% of the market comes from Russia and Belarus, and the Russo-Ukraine War has significantly impacted potash trade flows.

Lining up a critical mineral enables designers related permitting to single agency responsible for coordinating needed final approval, but it does not exclude those permits from environmental reviews. With most critical minerals are geared toward the Electric Vehicle (EV) supply chain taking the step of adding phosphate and potash to the critical mineral list would send a positive message signal that the U.S. recognizes the importance of ensuring a strong and sustainable domestic fertilizer supply for American farmers.

LEAD SPONSORS

In Support of H.R. 4059

To Include Phosphate and Potash on the
Final List of Critical Minerals of Department
of Interior

H.R. 4059 BIPARTIS/ AND COSP

Rep. Budzinski (D-Ill)

Rep. Cramer (R-Ore)

Rep. Craig (R-Minn)

Rep. Davis (D-KS)

Rep. Dicks (D-Wash)

Rep. Kilmer (D-Wash)

Rep. Parnell (D-Texas)

Rep. Roe (D-NC)

Rep. Staben (D-Mont)

New Democrat Coalition

DIVERSE STAKEHOLDER SUPPORT

EFFORTS TO RECOGNIZE P & K AS CRITICAL MINERALS

- April 3, 2025: Congressional Letter Urging Secretary Burgum to add P and K to critical minerals list
 - Bi-cameral/Bi-partisan
 - 43 members of Congress
 - 15 Senators
 - 28 Representatives

Congress of the United States
Washington, DC 20515

April 3, 2025

The Honorable Doug Burgum
Secretary of Interior
U.S. Department of Interior
1849 C Street NW
Washington, DC 20240

Dear Secretary Burgum,

Congratulations on your confirmation as Secretary of Interior. We know many pressing concerns await you as you begin your new role. We write with urgency to request that you immediately restore potash and add phosphate to the current (2022) and upcoming (2025) U.S. Geological Survey's Department of the Interior (DOI) List of Critical Minerals.

As you are aware, under the law defining critical minerals, three criteria must be met: a mineral must be essential to the economic or national security of the U.S., its supply chain must be vulnerable to disruption, and the mineral must serve an essential function in the manufacturing of a product. Both potash and phosphate fulfill these criteria, and their significance for U.S. national security, food security, and American farmers is especially critical, particularly given recent global events that have affected fertilizer markets and highlighted the risks of disruptions.

The U.S. depends on imports for approximately 85 percent of its potash needs, primarily sourcing it from Canada. Worldwide, only 14 countries produce potash, with Belarus and Russia accounting for nearly 40 percent of total production. The United States must address the growing risks to this supply chain, including a return to domestic production of potash as quickly as possible. The importance of potash to the nation's economic and national security was recognized in 2018 when DOI included potash on its list of 35 critical minerals. However, under the previous administration, the 2022 update removed potash from the list—a decision that clearly warrants reconsideration. We appreciate President Trump's support for reversing this in his March 20, 2025, executive order.

In contrast to potash, phosphate is more abundant in the U.S. Even so, we are heavily reliant on imports. With China and Russia—responsible for 25 percent and 14 percent of global phosphate exports, respectively—imposing export controls, the market remains highly vulnerable to supply disruptions. Adding phosphate to the U.S. Critical Minerals List would be an important step in strengthening domestic fertilizer manufacturing, stabilizing and securing this critical supply chain.

At the very heart of this issue are the American farmers who work tirelessly to feed Americans and much of the world. Fertilizers containing potash and phosphate are essential to maintaining soil fertility, improving crop yields, and ensuring consistent food production. Without access to a stable and affordable supply of these minerals, farmers face higher costs, reduced yields, and increased uncertainty—challenges that threaten their livelihoods and the food security of millions of American families.



Global Market

~90% of global nutrient use is outside of the United States

90%

2024 GLOBAL PHOSPHATE PRODUCTION AND EXPORTS

Processed Phosphates (P) Product Sum of MAP, DAP and TSP							
Production				Exports			
Ranking	Country	000 tons nutrient	Percentage of total	Ranking	Country	000 tons nutrient	Percentage of total
1	China	14,260	43%	1	Morocco	4,437	29%
2	Morocco	4,281	13%	2	China	3,741	24%
3	Russia	3,000	9%	3	Saudi Arabia	2,297	15%
4	Saudi Arabia	2,820	8%	4	Russia	2,202	14%
5	USA	2,670	8%	5	USA	952	6%
-	Other countries	6,505	19%	-	Other countries	1,865	12%

82% of global phosphate fertilizer supplies are vulnerable to adversarial use or manipulation, whether intentional or unintentional

- China and Russia produce 52% of global phosphate fertilizers
 - China imposed export restrictions during COVID stressing global supply
- Morocco and Saudi Arabia produce 21% of global phosphate fertilizers
 - Both countries phosphate mines are state owned controlled directly by their monarchies
- Combined, these 4 countries export 82% of global phosphate fertilizers

GLOBAL PHOSPHATE SUPPLY AND DEMAND TAKE AWAYS

Steady Increase in Fertilizer Demand

Phosphate demand is expected to increase by an average of 2.3% each year for the next several years.

Structural Change in Demand

Phosphate demand will likely increase because of growing lithium iron phosphate battery production, which will put further pressure on the phosphate fertilizer supply chain.

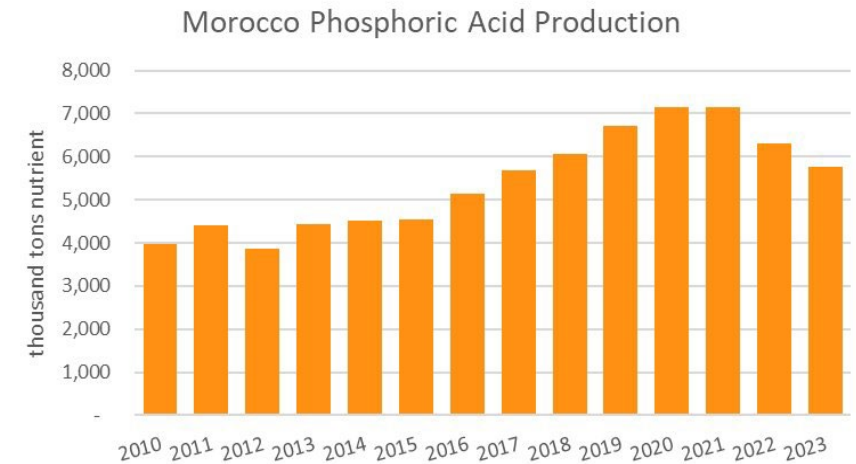
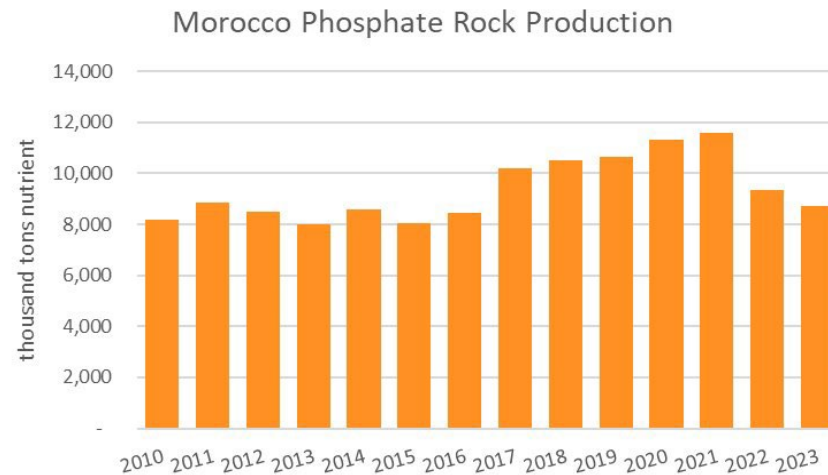
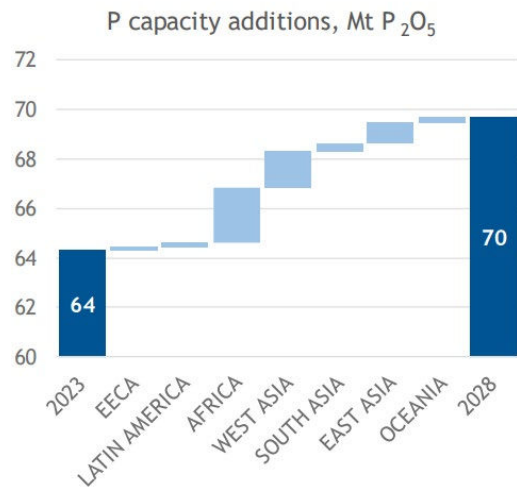
2028 vs. 2023

- › **Supply Growth: 9.4%, Demand Growth: 11.5%**

GLOBAL PHOSPHATE SUPPLY AND DEMAND TAKE AWAYS

Global phosphate supply has outperformed expectations, but the investment cycle is changing:

1. Lower fertilizer prices and U.S. permitting and regulatory challenges have weakened the investment case to fund new or expand capacity;
2. The industry is becoming more sustainable, underpinned by the energy transition, which raises project costs.

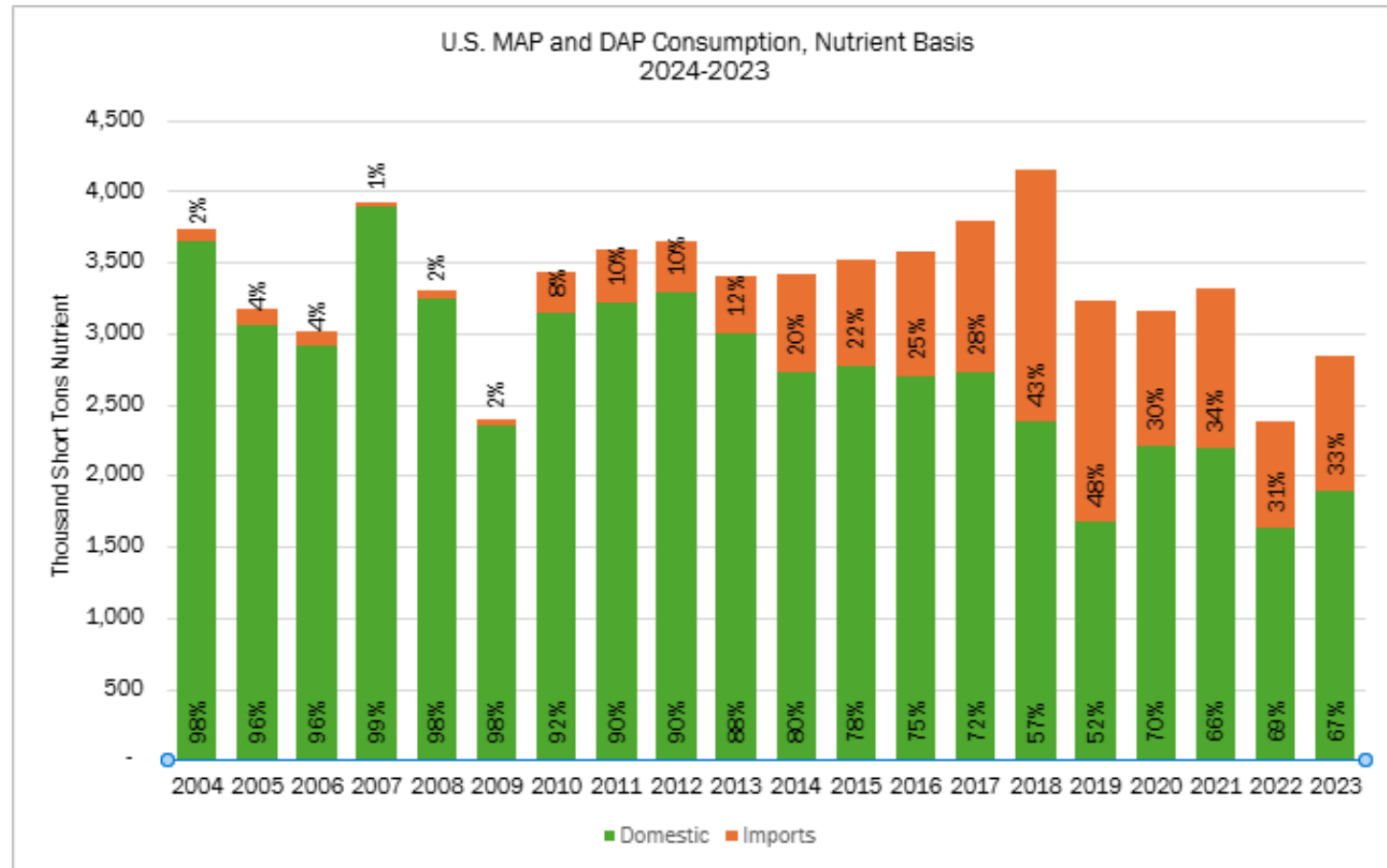


2028 vs. 2023

- › **Supply Growth: 9.4%, Demand Growth: 11.5%**

U.S. PHOSPHATE SUPPLY AND DEMAND TAKE AWAYS

- Over the last two decades increased reliance on imports
- Manufacturing occurs 365 days/year:
 - U.S. usage is seasonal, must export product during U.S. "off-season"
 - It is not practical to store for long periods of time due to phosphate's physical properties (hydrophilic), which lead to caking
 - Major permitting delays (regulatory and judicial)



PHOSPHATE SUPPLY SHOCKS

- The Port of Tampa, which handles the majority of phosphate import/export is vulnerable to hurricanes and port strikes
- Extreme weather can cause temporary mine closures, with significant impacts to supply (Ex: Milton)
- Labor strikes - >50% of phosphate supplies are moved by rail or barge
- Geopolitical – Russian invasion of Ukraine, China/Taiwan friction
- Trade Actions:
 - China
 - Morocco
 - Russia
- Others – COVID, cross border vaccine mandates, infrastructure bottlenecks (Panama Canal, low water in MS river, etc.)

OTHER FACTORS NOT CONSIDERED

- **Seasonal nature of fertilizer application**
 - › A supply disruption during the two, four-week fertilizer application windows could have devastating effects on crop yield for the entire year
- **USGS methodology concerns**
 - › USGS only considers Phosphate rock, NOT finished processed fertilizers
 - Accounting only for rock, USGS claims U.S. is only 13% reliant on imports
 - USGS – Peru accounts for 98% of U.S. phosphate rock imports, but this does NOT recognize
 - Peru is only 1.9% of global supply and lacks reserves
 - Peruvian reserves have declined 75% over past decade
 - › Heavily reliant on Chinese investments
 - Rock must be converted to fertilizer (about 1:5 ratio P₂O₅:PG) – transportation
 - › Over the last five years, U.S. imported, on average, 35% of its processed phosphate fertilizer consumption.
- **No awareness that USGS, as required by law, consulted with USDA or USTR.**



THANK YOU

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