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Sulfur in 2026: Trade Disruptions, Phosphate Margins, and Outlook

Jiyeon Kim, Rwit Chakravorty, Shawn Arita, and Sandro Steinbach



North Dakota State University
Agricultural Risk Policy Center

Fargo, North Dakota

>>> Highlights

- **Sulfur prices have eased from their mid-2026 peaks but remain about five times early-2025 levels.** Benchmarks peaked at $1,000–1,250 per metric ton between May and August. US Gulf NOLA prill had fallen 41 percent from its peak to $725 by November 20.
- **Trade disruptions drove the squeeze.** Russia's sulfur export ban, the disruption of shipping through the Strait of Hormuz, and China's suspension of sulfuric acid exports cut supplies. From March to August, Middle East sulfur exports fell by half, to 3.5 million metric tons, and Canada offset only about a fifth of the combined losses from the Middle East, Russia, and Kazakhstan.
- **Phosphate margins narrowed, and shipments to fertilizer producers fell.** The DAP margin proxy averaged $136 per metric ton in January–October 2026, about half its 2025 level of $262, and from late April to early October a metric ton of NOLA prill cost more than a metric ton of Midwest retail DAP. From March to September, seaborne sulfur loadings to identified fertilizer users were 35 percent below their 2022–2024 average, compared with 21 percent for other cargoes, and Mosaic curtailed phosphate output.
- **Prices eased, but supply has not recovered.** World seaborne loadings of cargoes identified as sulfur in October were 38 percent below their 2022–2024 average and no higher than in June, as gains at ports outside Hormuz and in Russia did not offset the shortfall inside the strait. With loadings falling, the price easing points to buyers cutting back, so prices could firm again as phosphate plants restart. Mosaic expects its lower fourth-quarter sulfur contract to lift earnings mainly in early 2027, so US farmers may see little DAP relief before spring.

>>> Focus Article

Sulfur Prices Have Eased from Their Peaks but Remain Elevated

Three successive disruptions tightened sulfur and sulfuric acid supplies from late 2025 through mid-2026: Russia's sulfur export ban from November 2025, the disruption of shipping through the Strait of Hormuz from February 28, 2026, and China's suspension of sulfuric acid exports in May. The Hormuz disruption was particularly consequential because the Gulf region normally supplied about 44 percent of global sulfur exports in 2024 (Arita et al., 2026). Unlike in 2022, when Russian exports were redirected to other markets after the invasion of Ukraine, Gulf shipments could not readily be rerouted, and other suppliers could not fully replace the lost volumes (Arita et al., 2026). Most sulfur is recovered as a by-product of oil refining and natural gas processing, limiting how quickly production can respond to higher sulfur prices. The combination of a large supply loss and limited replacement sources intensified the upward pressure on prices.

Sulfur prices have since eased from their mid-2026 peaks, but they remain about four to five times their early-2025 levels. These elevated prices matter for agriculture because sulfur is used to produce sulfuric acid, a key input in phosphate fertilizers such as DAP and MAP. The recent price decline alone does not establish that supply conditions have improved; export volumes and purchasing trends are also needed to assess whether the market is recovering.

Sulfur prices roughly tripled in 2025, rising from $148–182 per metric ton in early January to $495–565 at the end of December, before climbing further in 2026 (Exhibit 1). Prices in the four markets shown (China CFR, Brazil CFR, UAE FOB, and US Gulf NOLA prill) reached peaks of $1,000–1,250 per metric ton between May and August; three more than doubled from their late February levels, while UAE FOB (ADNOC) rose 89 percent. By November 20, prices were 12 to 41 percent below their peaks. NOLA prill recorded the largest decline, falling from $1,235 in late August and early September to $725 on November 20, below the UAE FOB price. UAE FOB held at $1,000 from July into early October before dropping to $890 in October and $740 in November, while China CFR has held at $965 since mid-October, 12 percent below its peak and the smallest decline of the four. Whether this easing continues will depend on both the recovery of shipments from major exporters and the pace of buying by fertilizer and metals producers.

Sulfur prices eased from the mid-2026 peaks but remain about five times early-2025 levels.

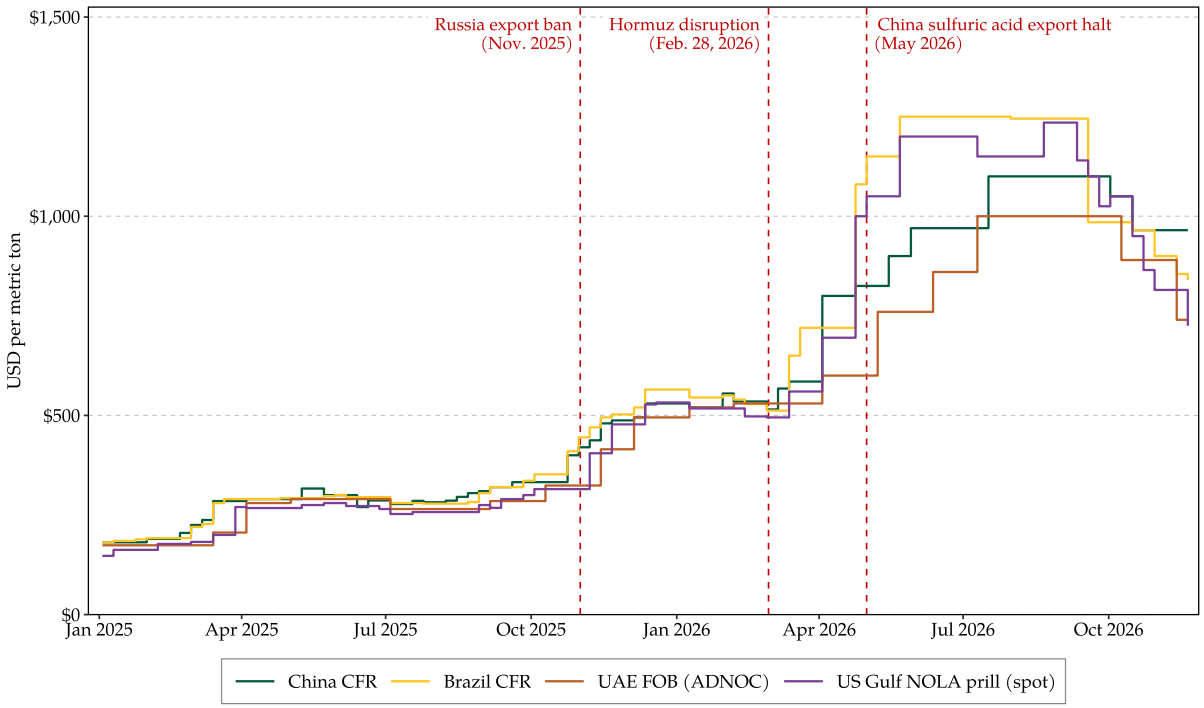

Exhibit 1: *Weekly Sulfur Prices, January 2025–November 2026.*

Note: Weekly prices through Nov. 20, 2026. ADNOC is a monthly price, repeated in the weekly data. CFR is the delivered price at the destination port, FOB is the export price at the loading port.

Source: NDSU using data from Bloomberg.

Supply Losses Were Concentrated in Major Export Regions

The trade data show a substantial contraction in exports during the months when sulfur prices climbed to their 2026 peaks. From March to August 2026, the six months after the Strait of Hormuz disruption, world exports of elemental sulfur totaled 12.9 million metric tons, 20 percent below the 2023–25 average for the same months (Exhibit 2). The losses were concentrated in two regions. Middle East exporters shipped 3.5 million metric tons, down from a March–August average of 6.9 million in 2023–25. Exports from Russia and Kazakhstan fell by a third, to 2.0 million metric tons. Canada raised its exports by about 0.9 million metric tons, but that offset only about a fifth of the 4.3 million metric tons lost from the other two regions.

Supply losses were not limited to elemental sulfur. Producers that import sulfuric acid directly also

faced lower traded volumes. World sulfuric acid exports fell 12 percent, to 9.3 million metric tons, with China accounting for most of the decline. Its exports dropped from 1.5 million metric tons to 0.4 million metric tons, a fall of nearly three-quarters that coincided with its suspension of acid exports from May. Higher shipments from India and Germany made up only part of China's loss, so buyers faced less of both sulfur and sulfuric acid on world markets.

Middle East sulfur exports halved and China's sulfuric acid exports fell by nearly three-quarters; other suppliers offset only part of the loss.

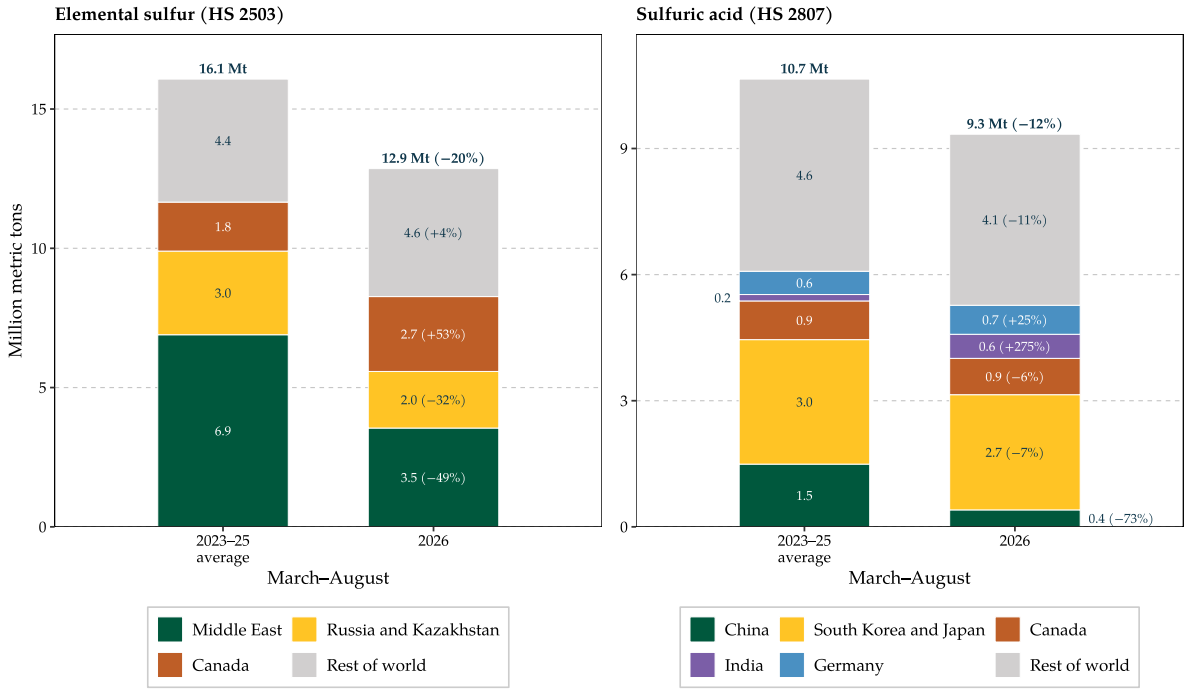

Exhibit 2: *Sulfur and Sulfuric Acid Exports by Region, March–August 2026 vs. the 2023–25 Average.*

Note: The 2023–25 average is the mean of the three March–August totals; percentages on the 2026 bar compare with that average. Middle East includes Saudi Arabia, UAE, Qatar, Kuwait, Oman, Iran, Iraq, and Bahrain. Qatar (Apr.–Aug.) and Iran (Mar.–Aug.) use partner-reported imports because they had not reported exports.

Source: NDSU using data from Global Trade Atlas (GTA).

Phosphate Margins Narrowed and Sulfur Shipments to Fertilizer Producers Fell

The DAP margin proxy averaged $136 per metric ton of DAP in January–October 2026, compared with $262 for full-year 2025 and $204 for 2024 (Exhibit 3). The proxy fell to a low of $87 in February, recovered in the spring as DAP prices rose after the Hormuz disruption, and narrowed again when sulfur costs peaked in July and August. Sulfur accounted for about 48 percent of estimated input costs in October 2026, up from 8 percent in January 2024. The proxy recovered to $170 in October as input costs eased, but company results show the squeeze: Mosaic's phosphate segment earned $49 million in adjusted EBITDA in the third quarter, down from $280 million a year earlier, and Nutrien attributed lower phosphate earnings to higher sulfur costs (Mosaic, 2026; Nutrien, 2026).

Sulfur accounted for nearly half of estimated DAP input costs in October 2026, while the margin proxy remained below its 2025 average.

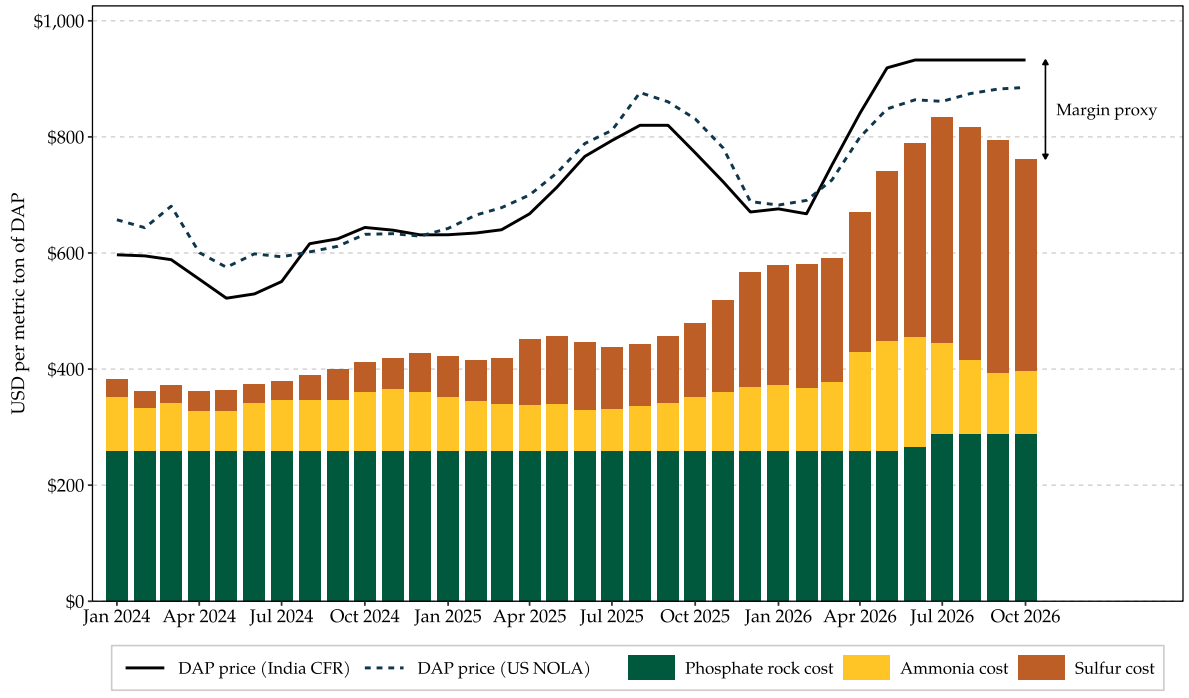

Exhibit 3: *International DAP Margin Proxy, January 2024–October 2026.*

Note: Margin proxy = India CFR DAP – (1.7 t phosphate rock (North Africa) + 0.22 t ammonia (India CFR) + 0.4 t sulfur (UAE FOB, ADNOC) per metric ton of DAP). The dashed line shows the NOLA DAP price for comparison.

Source: NDSU using data from Bloomberg.

NOLA prill cost more per metric ton than Midwest retail DAP for most of the period from late April to early October 2026, peaking at 126 percent of the Midwest retail DAP price in late May and June and reaching 124 percent again in late August, when sulfur prices peaked (Exhibit 4). The ratio fell to 69 percent in mid-November, about five times its 2016–2025 median of 15 percent. The decline came entirely from lower sulfur prices: Midwest retail DAP rose from about $999 per metric ton in late August to $1,048 in late October, its highest level since September 2022. Because producers use about 0.4 metric tons of sulfur per metric ton of DAP, NOLA prill would have cost roughly half Midwest retail DAP price in late August and about 31 percent in late October. Mosaic, the largest US producer, paid less because it buys much of its sulfur on quarterly contracts: its third-quarter cost of $715 per long ton (about $704 per metric ton) was well below the $1,235 NOLA prill peak, and its fourth-quarter contract is $615 (Mosaic, 2026).

NOLA prill cost more than Midwest retail DAP from late April to early October 2026 and was still 69 percent of DAP in mid-November (2016–2025 median: 15 percent).



Exhibit 4: *US Gulf NOLA Sulfur Prill Price as a Percent of the Midwest Retail DAP Price, 2016–November 2026.*

Note: Weekly prices through Nov. 20, 2026. Midwest retail DAP is the US Cornbelt retail price, quoted in short tons and converted to metric tons. The ratio compares a wholesale Gulf sulfur price with a farm-level Midwest retail DAP price and is not sulfur's share of production cost.

Source: NDSU using data from Bloomberg.

Fertilizer producers responded by adjusting output, sourcing, and product mix. Mosaic curtailed phosphate output because of limited supplies of affordable sulfur, including idling its higher-cost Louisiana production (Mosaic, 2026), while OCP diversified sulfur sourcing and brought scheduled maintenance forward. OCP also raised triple superphosphate (TSP), which needs less sulfur and no ammonia, to 35 percent of its fertilizer export volumes in the first half of 2026, up from 26 percent a year earlier, to help manage input costs (OCP Group, 2026).

Ship-tracking data show a larger drop in sulfur loaded for fertilizer producers than for other buyers (Exhibit 5). From March to September 2026, seaborne loadings to identified fertilizer users totaled 4.8 million metric tons, 35 percent below the 2022–2024 average for those months, while other cargoes totaled 6.8 million metric tons, 21 percent below it. Against 2025, when both groups ran above their 2022–2024 levels, the gap was narrower: 39 percent versus 35 percent.

Sulfur loadings to fertilizer producers showed a larger decline than other cargoes.

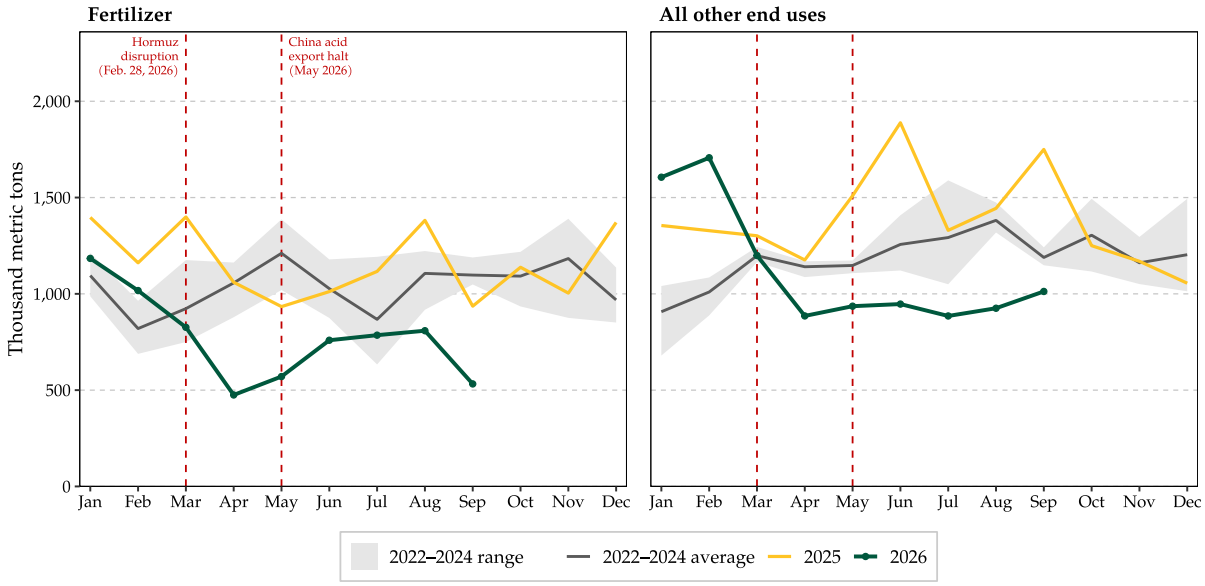

Exhibit 5: *Monthly Global Seaborne Elemental Sulfur Loadings, Fertilizer vs. All Other End Uses.*

Note: Fertilizer use is identified from buyer names or discharge installations/ports. The remaining cargoes include other uses and unidentified shipments. 2026 data run through September.

Source: NDSU using data from Kpler (as of Nov. 17, 2026).

What to Watch in Late 2026 and 2027

Sulfur prices in 2027 depend largely on whether loadings from inside the Strait of Hormuz recover and whether export restrictions ease. Loadings inside Hormuz rebounded in June and July, but the rebound faded as attacks on shipping intensified in September and October; October loadings were 66 percent below their 2022–2024 average (Exhibit 6). Loadings of sulfur from Middle Eastern ports outside the strait doubled between July and September but fell back in October. Loadings from Russian ports, which handle most Kazakh sulfur, nearly stopped in June and July under rail and export restrictions. After Russia lifted its rail restrictions on July 24, loadings recovered to 193 thousand metric tons in October, still below their 2022–2024 range. These gains did not offset the shortfall inside Hormuz: world seaborne loadings in October were 38 percent below their 2022–2024 average and lower than in June.

Hormuz loadings stayed low while other regions picked up after July.

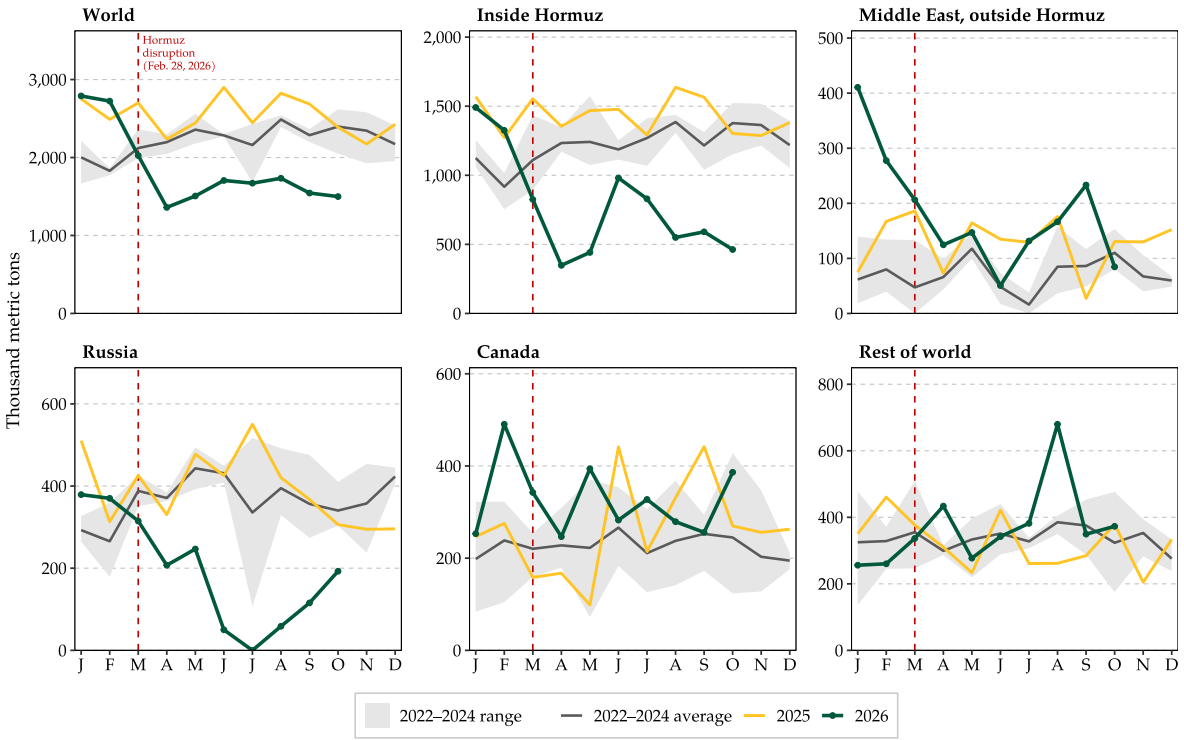

Exhibit 6: *Monthly Seaborne Elemental Sulfur Loadings by Origin.*

Note: By loading month, in thousand metric tons. Inside Hormuz includes Gulf ports of Saudi Arabia and the UAE and ports of Bahrain, Iran, Iraq, Kuwait, and Qatar. Middle East, outside Hormuz includes Oman, Saudi Red Sea ports, the UAE ports of Fujairah, Khor Fakkan, Dibba, and Jordan. Russia includes Kazakh sulfur shipped through Russian ports.

Source: NDSU using data from Kpler (as of Nov. 17, 2026).

Prices have eased since late summer even as loadings fell, which points to buyers cutting purchases rather than a recovery in supply. Sulfur prices could firm again as phosphate plants restart and spring demand builds, unless Gulf loadings recover. For US farmers, the practical question is whether cheaper sulfur reaches DAP and MAP prices before spring application, and little relief looks likely by then. Midwest retail DAP prices rose about 5 percent from the August sulfur peak to late October, and NOLA prill still cost about 78 percent as much as Midwest retail DAP, against a 2016–2025 median of 15 percent (Exhibit 4). Mosaic expects fourth-quarter phosphate margins to weaken further as higher-cost raw materials, including sulfur, work through inventory, with the benefit of its lower contract showing mainly in the first quarter of 2027, so producers are likely to rebuild margins before cutting prices (Mosaic, 2026). Domestic supply is also shrinking: Mosaic's curtailments extend to its South Fort Meade, Florida, mine in the fourth quarter, and Nutrien plans to shut down its White Springs, Florida, phosphate operations in the second quarter of 2027 as the mine nears the end of its economically recoverable reserves (Nutrien, 2026). Exhibit 7 summarizes the indicators to track.

Sulfur supply has recovered only in part; watch these indicators into 2027.

Indicator	Latest reading	What to watch
Prices	Mid November: NOLA prill $725 and Midwest retail DAP about $1,048 per metric ton.	Whether cheaper sulfur reaches DAP and MAP prices before spring.
Hormuz loadings	October sulfur loadings were 66 percent below the 2022–2024 average; attacks on ships rose in the fall.	Whether attacks ease enough for Gulf loadings to recover.
Export controls	Russia bans sulfur exports and limits acid exports through 2026; China has halted most acid exports since May.	Whether Russia and China extend them into 2027.
US phosphate supply	Mosaic idled Louisiana and is curtailing South Fort Meade; Nutrien closes White Springs in the second quarter of 2027.	Whether Mosaic restores output as sulfur costs fall.

Exhibit 7: *Indicators to Watch for Sulfur and US Phosphate Markets.*

Source: NDSU using data from Bloomberg, Kpler, Mosaic, Nutrien, and trade press reports.

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About the Authors



Jiyeon Kim, Ph.D.

Jiyeon is a Junior Research Economist with the Agricultural Risk Policy Center at North Dakota State University. Her research examines how international trade and agricultural policies affect the farm economy, providing insights into how agricultural production responds to trade shocks.



Rwit Chakravorty, Ph.D.

Rwit is a Junior Research Economist with the Agricultural Risk Policy Center at North Dakota State University. His research focuses on production economics, examining risk management strategies and market disruptions affecting input costs in domestic and global markets.



Shawn Arita, Ph.D.

Shawn is the Associate Director of the Agricultural Risk Policy Center at North Dakota State University. His research provides timely insights for policymakers, producer groups, and trade analysts navigating the impacts of supply chain shocks on global agricultural markets.



Sandro Steinbach, Dr. Sc.

Sandro is the Director of the Agricultural Risk Policy Center at North Dakota State University. His work focuses on agricultural trade, policy, and risk issues affecting U.S. agriculture, leading research and policy analysis that supports producers and policymakers.



Richard H. Barry Hall 400, Fargo, ND

arpc@ndsu.edu

Website

LinkedIn