Semiannual fertilizer outlook

Tensions in the Middle East trigger disruptions in the fertilizer market

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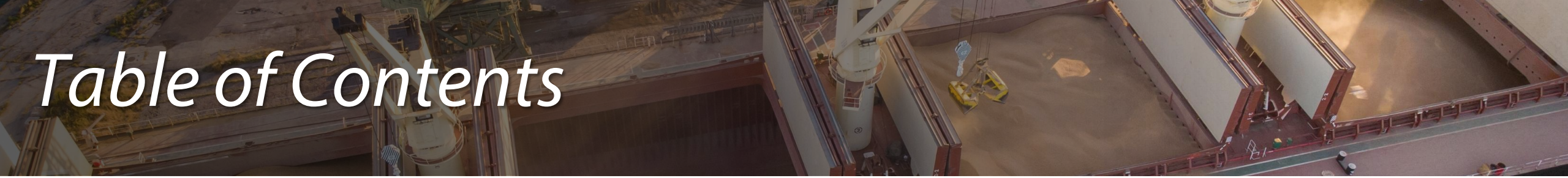

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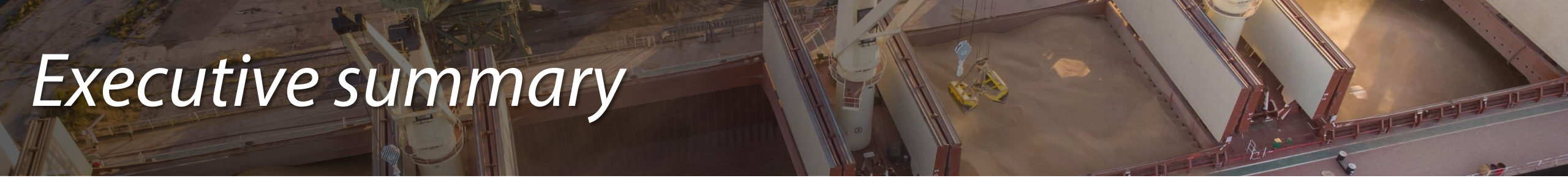


Executive summary

Tensions in the Middle East trigger disruptions in the fertilizer market

Global fertilizer markets ended Q1 2026 under severe strain. Escalating geopolitical disruption in the Middle East and the effective closure of the Strait of Hormuz have removed a substantial volume of fertilizers and critical inputs from global trade, triggering an abrupt supply shock that cannot be quickly replaced. The resulting market environment is characterized by tight availability, sharply higher prices, and elevated volatility across major nutrients.

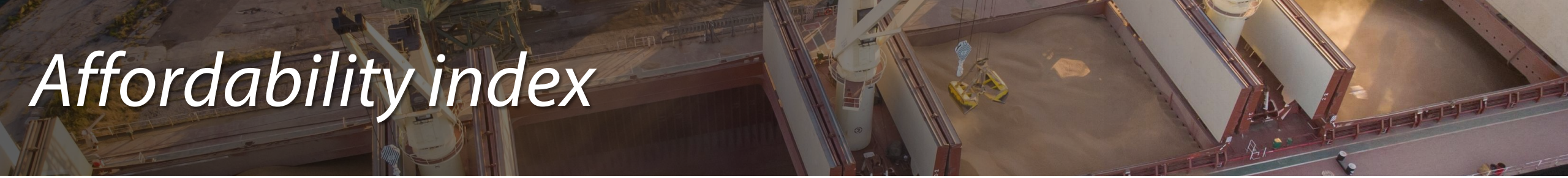
Fertilizer affordability has deteriorated rapidly. Prices for nitrogen and phosphates have risen far faster than agricultural commodity prices, compressing farm margins and accelerating affordability stress. RaboResearch's fertilizer affordability index has moved decisively into negative territory and is expected to remain constrained throughout 2026, with only limited recovery in the second half of the year. This raises the risk of widespread demand destruction as farmers reduce application rates, delay purchases, or shift crop choices.

Nitrogen markets are the most exposed. Disrupted trade flows, higher energy prices, and production curtailments have driven a sharp increase in urea prices and tighter global balances. As a result, global nitrogen demand is forecast to decline meaningfully in 2026, marking one of the deepest contractions since 2022.

Phosphate markets are similarly pressured. Supply disruptions and sharply higher input costs, particularly ammonia and sulfur, have reinforced structural tightness. Elevated prices are expected to persist into 2027, with global phosphate demand falling below trend levels in 2026.

Potash remains comparatively more balanced, benefiting from more diversified supply chains. However, indirect effects from weak affordability in other nutrients are expected to weigh modestly on demand in 2026.

Overall, the fertilizer market faces a prolonged period of tight supply, weak affordability, and heightened price risk. Even if geopolitical tensions ease, normalization will be slow. The outlook for 2026 points to continued pressure on farm economics and increased downside risks for global crop production and food price stability.



Affordability index

Fertilizer affordability faces additional pressure

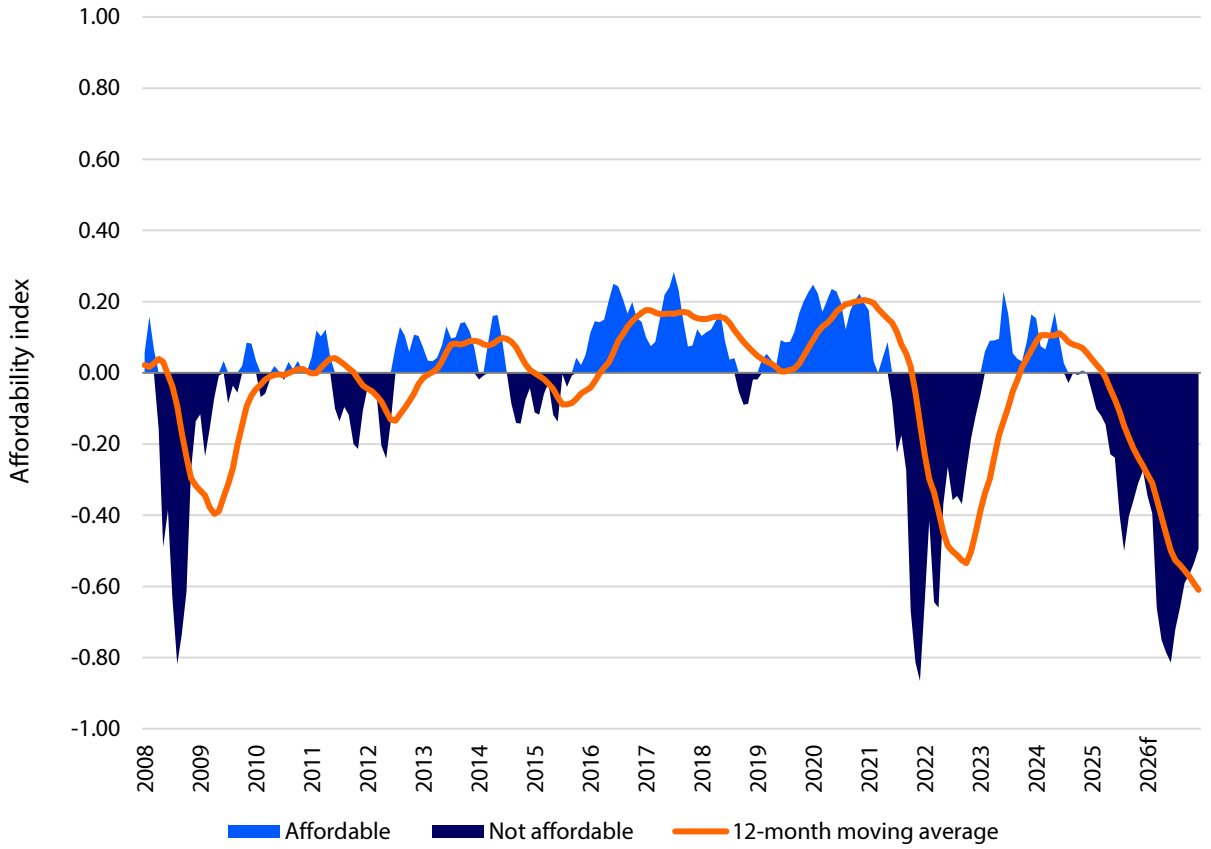
Fertilizer affordability was already under pressure in 2025, as prices for nitrogen and phosphates had steadily increased. Following some signs of improvement in the final months of 2025, affordability once again fell under pressure in the first quarter of 2026 due to the conflict in the Middle East (see figure 1). Nitrogen and phosphates have been particularly affected, but potash affordability remains neutral, as supply has not been significantly impacted by the conflict.

An increase in agri commodity prices to sufficiently high levels could compensate the rise in fertilizer costs, but although commodity prices have risen since the beginning of the year, they remain below the levels observed between 2020 and 2022. Underlying market fundamentals influencing several key commodities have not significantly changed. Given that, we do not expect commodity prices to increase to levels similar to those in 2022 in the short term. Consequently, higher input costs will weigh on fertilizer demand in 2026 as farmers face rising cost pressures.

Looking ahead, we expect fertilizer affordability to remain negative, with our models indicating the 12-month moving average (12-MMA) will reach its lowest level in December 2026, the last forecast month of our model. Although some improvement is anticipated in the second half of 2026, we expect nitrogen and phosphate affordability to remain under pressure, keeping the 12-MMA in negative territory for longer. This outlook assumes that the conflict and the de facto closure of the Strait of Hormuz are temporary and that the strait will slowly reopen for shipping after April.

A prolonged conflict or extended closure would challenge supply chains with more severe disruptions and have a sustained impact on fertilizer supply, prices, and demand, resulting in prolonged negative fertilizer affordability. In such a scenario, farmers may switch to planting crops that require less nitrogen or choose to lower application rates and/or planted area, impacting demand for a longer period.

Figure 1: Fertilizer affordability deepens into negative levels



Source: *RaboResearch 2026*

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RaboResearch fertilizer dashboard

Consumption bias:

2026f	2027f
Downward	Slightly upward

Fertilizer price bias:

Next six months

Nitrogen	Phosphate	Potash
Upward	Upward	Slightly upward

Affordability index

-0.74

April 2026f

Nitrogen	Phosphate	Potash
-1.17	-0.55	0.03

US: 0.35 Max | -0.35 | -0.68 Min

Europe: 0.30 Max | -0.68 | -1.00 Min

China: 0.34 Max | -0.09 | -0.25 Min

India
Bias: Negative

Africa
Bias: Negative

Brazil: 0.43 Max | -0.30 | -0.84 Min

Argentina
Bias: Negative

Australia
Bias: Negative

- Positive
- Slightly positive
- Neutral
- Slightly negative
- Negative

Note: Max/min refer to the historical maximum and minimum value for the affordability index in each region. The historical database started in 2010.

Source: *RaboResearch 2026*

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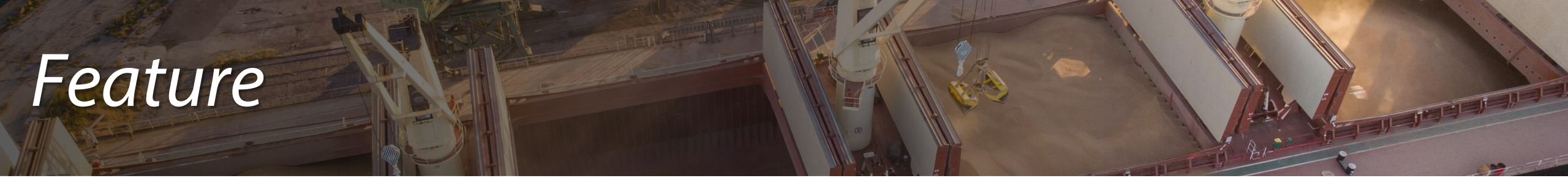


Feature

Middle East conflict triggers global fertilizer supply shock and prolonged market tightness

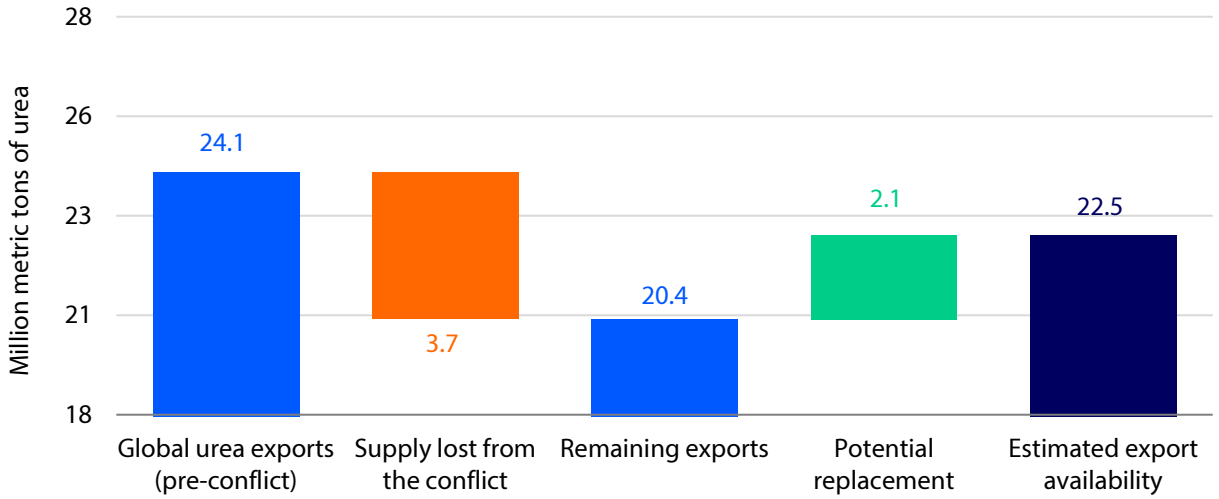
The ongoing conflict in the Middle East has triggered severe tightening of global fertilizer markets, with the blockade of the Strait of Hormuz removing an estimated 0.8 million metric tons per month of fertilizers and key precursors from global markets. With 30% of global urea, 27% of ammonia, 24% of phosphates, and 48% of sulfur exports transiting this corridor, the shutdown creates a supply shock that cannot be fully replaced, assuming the conflict lasts around four to five months (see figure 2).

The disruption is cascading through energy markets worldwide, with South Asia among the hardest hit. The collapse of Qatar's liquified natural gas (LNG) flows has sharply reduced nitrogen production in India, Pakistan, and Bangladesh and pushed Indian urea output toward the lower end of its historical range. North African producers, particularly in Egypt and Algeria, are facing soaring LNG costs and intensified competition for spot cargoes, tightening their exportable ammonia and urea volumes. European ammonia producers now face rising risk as natural gas prices strengthen, pressuring margins and increasing curtailment potential. This energy-linked stress is now a defining feature of nitrogen production volumes.

Phosphate fertilizer markets also face direct and indirect impacts. Directly, Saudi Arabia's Ma'aden has been unable to ship normal DAP/MAP volumes because vessels remain trapped inside the gulf. Indirectly, phosphate production costs are escalating. With vessels blocked, sulfur supply from Bahrain, Kuwait, Qatar, and Saudi Arabia is effectively frozen in place. At the same time, roughly 27% of global seaborne ammonia has been cut off by the strait's closure, sending global ammonia benchmarks sharply higher. Phosphate producers dependent on Middle Eastern sulfur and ammonia, such as those in Morocco, China, and Indonesia, face compressed margins, which reinforces product shifts and structurally tighter supply.

At the same time, alternative sourcing options are shrinking as countries introduce stronger domestic protection measures. Turkey's urea export ban has halted shipments, including cargoes already loaded for India, redirecting all volumes to its domestic market. Russia's suspension of ammonium nitrate (AN) exports has removed a major low-cost supply source just as several Russian nitrogen plants face drone damage and production shutdowns. China remains a critical swing supplier, but export restrictions on urea, DAP/MAP, NP, and SSP/DSP are expected to persist, limiting global relief across nitrogen and phosphates. As fertilizer prices surge amid increasingly constrained supply, the fertilizer-to-crop affordability ratio continues to deteriorate, with RaboResearch's affordability index recording its steepest decline since early 2022. As a result, demand destruction is becoming unavoidable: Farmers are expected to trim application volumes in the current season and likely the next crop cycle as well.

Figure 2: Estimated impact on global urea export availability in 2026



Source: *International Fertilizer Association (IFA), RaboResearch 2026*

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Nitrogen

Urea demand to fall in 2026 as a result of the Middle East conflict

Urea prices were rising even before the Middle East conflict began, and the turmoil caused by the conflict has further destabilized the nitrogen market, causing prices to surge. Since a resolution to the conflict appears unlikely in the near term, demand is expected to decline in 2026 due to price increases and supply disruptions.

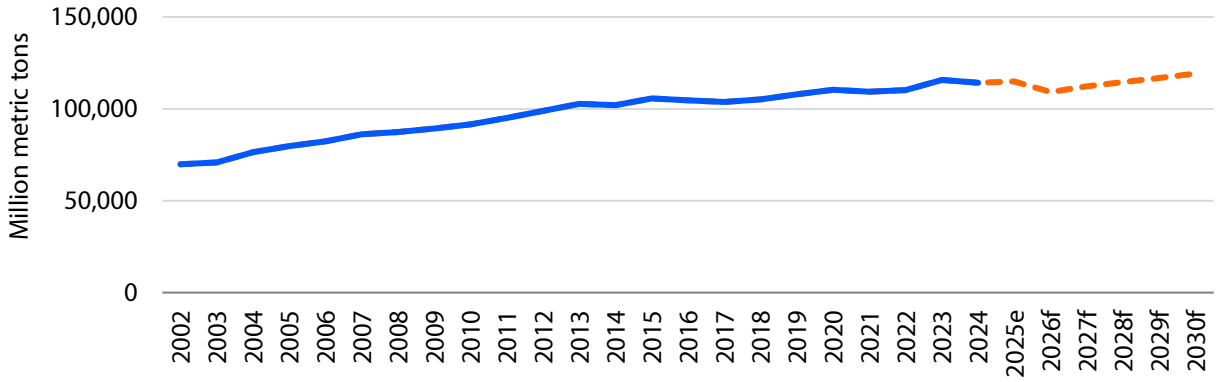
To get a view on the conflict's impact on prices, we compared the current scenario with the outbreak of war in Ukraine in 2022. In January 2026, urea prices began rising due to temporary shortages related to Indian tenders. Following the outbreak of war in the Middle East, urea prices increased globally by over 43%. The Ukraine war drove a 62% rise in three weeks. Prices peaked at a 67% increase and returned to pre-conflict levels after 24 weeks.

The current scenario underpinning nitrogen affordability is more complicated than that of 2022. In 2022, the 12-MMA bottomed out at -0.57 about seven months after the conflict began, with the negative dip lasting 24 months. At that time, commodity prices were much higher than they currently are, softening the impact on affordability. This year, the index is expected to reach -0.61 in April and drop to a low of -1.02 in December, with the negative phase expected to last over 24 months.

Compared to 2021, demand remained almost stable in 2022, as illustrated in figure 3, despite low affordability. However, our latest analysis indicates a different scenario this time. The closure of the Strait of Hormuz has already disrupted Middle Eastern exports. If natural gas and fertilizer production capacities are compromised, global supply could be further impacted.

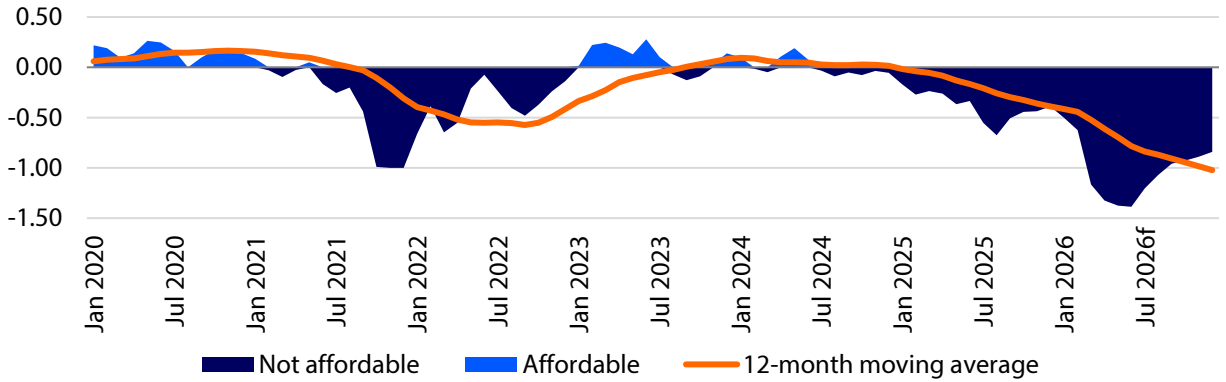
RaboResearch analysis projects that urea demand will decline by around 5% in 2026 compared to 2025, depending on the length of ongoing conflicts and reductions in production capacity. Likely, other regions will raise production and exports to mitigate the effects, though this additional output will probably be insufficient to offset the loss of Middle Eastern exports if disruptions last longer than five months.

Figure 3: Global urea consumption projected to decrease in 2026



Source: RaboResearch 2026

Figure 4: Affordability index falls further in 2026



Source: RaboResearch 2026

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Phosphates

Persistently high prices to impair demand in 2026 and beyond

The phosphates market has experienced elevated prices since 2021. Geopolitical developments, shifts in market dynamics, and rising raw material costs have contributed to this change. And because commodity prices have not risen at the same rate, phosphate affordability has become a concern for farmers, leading to consequences for demand.

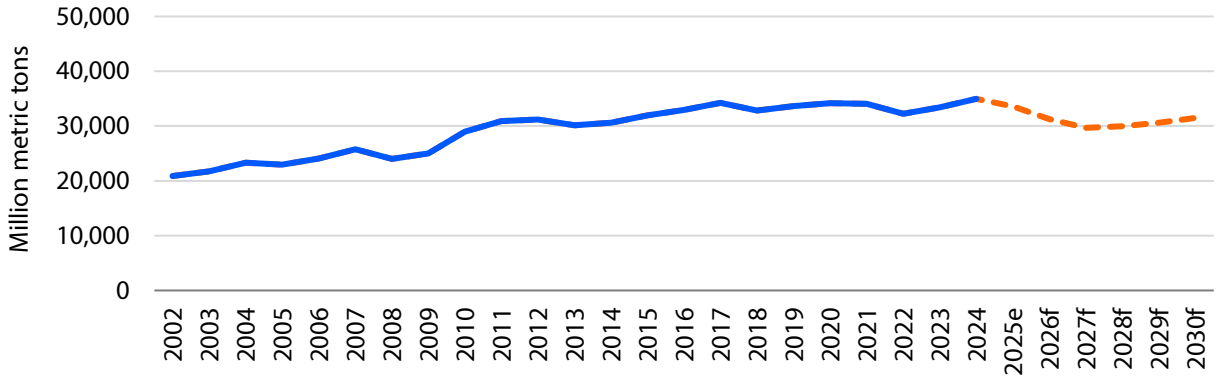
In mid-2021, increasing raw material costs began to impose upward pressure on producer prices. During this period, China suspended exports to prioritize its domestic market. Subsequently, the outbreak of war in Ukraine in February 2022 provided further impetus for price increases, resulting in levels that remained elevated above those of July 2021 until April 2023.

Although these circumstances are not identical, they display significant similarities to the current context. Rising costs of raw materials, the exit of China from the market, and ongoing conflict have contributed to a challenging environment. In 2022, the 12-MMA of RaboResearch's affordability index (see figure 6) fell to -0.40, resulting in reduced demand for phosphates during that year. Data from the International Fertilizer Association (IFA) indicates that phosphate demand decreased by approximately 5.3% in 2022 (refer to figure 5).

The lowest recorded value for the index's 12-MMA is -0.64, observed in 2008 following a 6.7% decline in demand. The index remained negative for nearly two years during that period, as well as in 2022. According to our models, the 12-MMA is projected to reach -0.65 by August 2026 and stay below zero at least through December 2026, which is the final forecast month. However, based on an analysis of phosphate market fundamentals, elevated prices are expected to persist, limiting affordability into 2027.

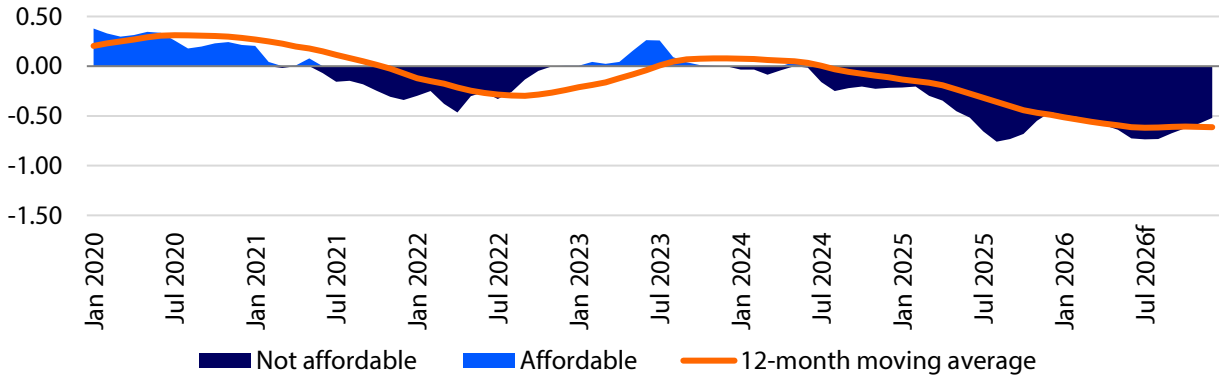
RaboResearch's model shows a reduction in phosphate demand of 7%, falling below 32m mt of nutrient for the first time since 2015.

Figure 5: Phosphate demand projected to decrease in 2026 and 2027



Source: *RaboResearch 2026*

Figure 6: Index projects an extended period of negative affordability



Source: *RaboResearch 2026*

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Potash

Potash demand forecast to fall in 2026

The potash market remains relatively stable, with supply holding steady and prices showing minimal upward movement in comparison to related fertilizers. However, demand is projected to decline in 2026 as an indirect consequence of anticipated price increases in nitrogen and phosphates.

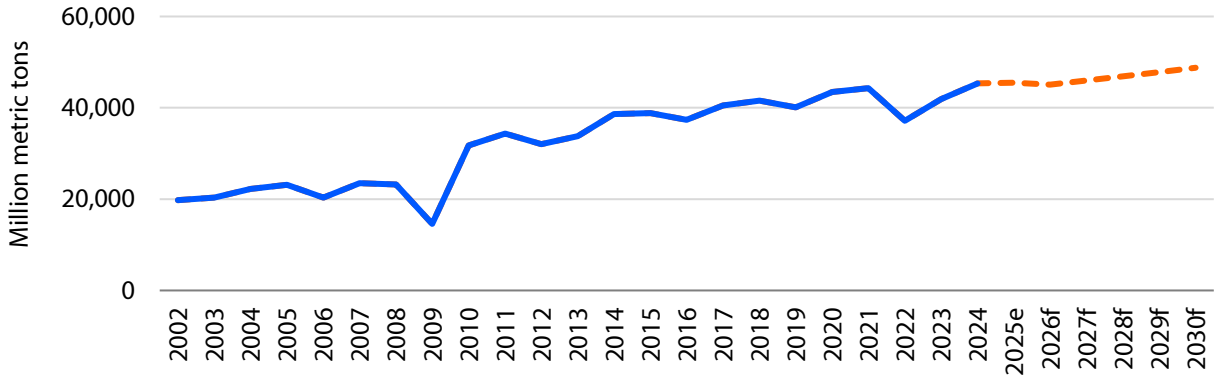
The financial situation of farmers across the globe has been challenging for several years and shows little sign of improvement in the near term. This may affect farmers' operating expenses. The direct impact of the conflict in the Middle East on potash is limited. But indirect implications include logistical issues (ocean freight) and SOP production, which uses sulfuric acid and might be impacted by sulfur prices.

Farmers may respond to rising urea and phosphate prices by opting to decrease potash applications and allocating resources toward purchasing urea and phosphates. Such an approach would enable them to achieve a more optimal balance of nutrient application, albeit at a reduced overall volume.

Potash prices have been gradually rising since 2024, when they hit their lowest point in years. Both increased demand and ongoing price corrections are driving the upward trend, and affordability has declined as a result. After maintaining positive values for roughly 29 months, the 12-MMA of RaboResearch's affordability index turned negative in March 2026 (see figure 8), and it is expected to stay negative through the end of the year.

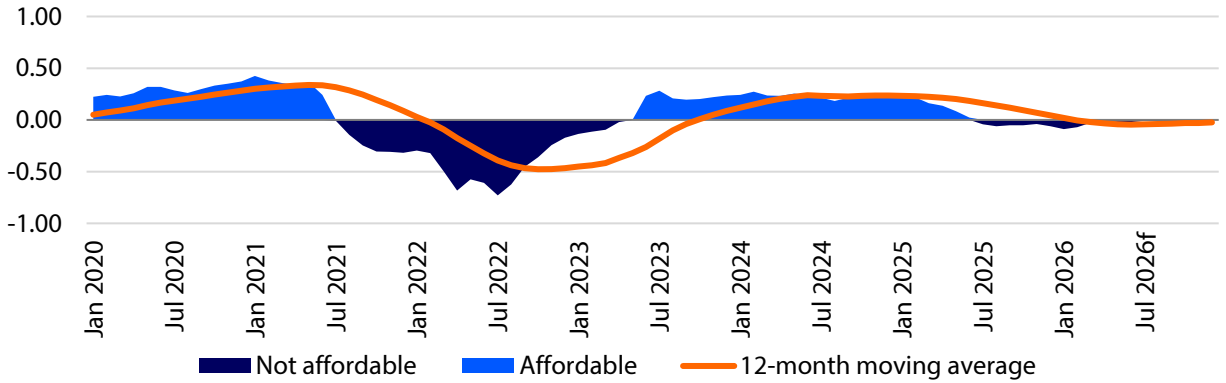
Therefore, RaboResearch's forecast shows a slight decline in potash demand this year (see figure 7), with our models predicting a decrease of about 1% compared to 2025. However, our analysis suggests that demand will grow again next year as market conditions improve and affordability returns to positive.

Figure 7: Potash demand to weaken in 2026 but recover in 2027



Source: *RaboResearch 2026*

Figure 8: Affordability index to turn negative in 2026



Source: *RaboResearch 2026*

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Fertilizers in numbers

Nitrogen

Production: 110 *million metric tons of nitrogen*

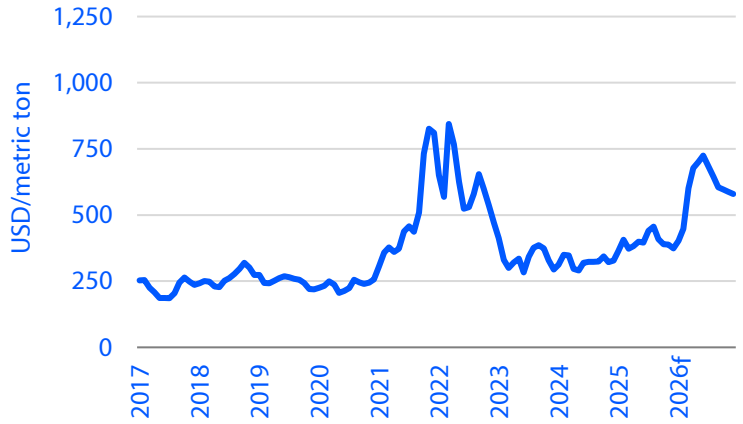
Consumption: 109 *million metric tons of nitrogen*

Bias: Downward

Affordability index - Nitrogen

-1.17

Figure 9: Prices expected to rise due to the ongoing conflicts



Phosphates

Production: 32.2 *million metric tons of P2O5*

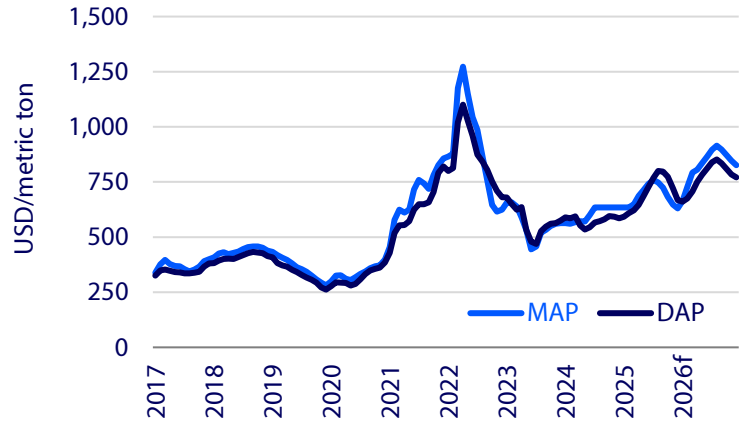
Consumption: 31.2 *million metric tons of P2O5*

Bias: Downward

Affordability index - Phosphate

-0.55

Figure 10: Limited supply continues to drive the upward trend



Potash

Production: 45.0 *million metric tons of K2O*

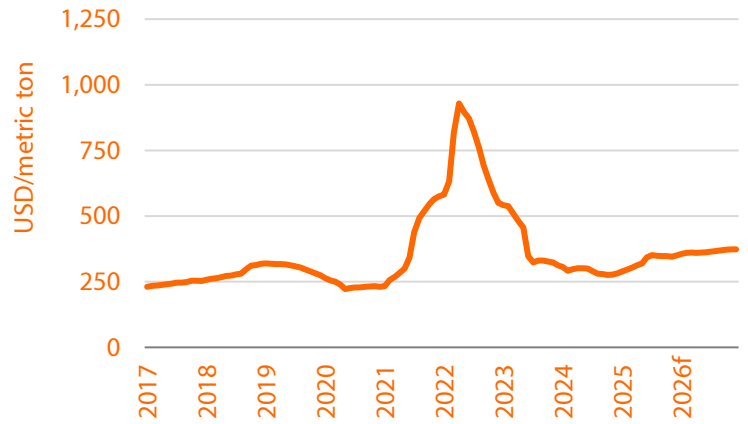
Consumption: 45.0 *million metric tons of K2O*

Bias: Downward

Affordability index - Potash

0.03

Figure 11: Prices expected to rise, despite balanced supply



Source: *CRU, RaboResearch 2026*

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Agricultural commodities

Market fundamentals will eventually rule

Since the airstrikes on Iran on February 28, agricultural commodity prices have rallied, following crude oil to multiyear highs. However, the bearish fundamentals of an oversupplied market that were in place the day before the war started still stand. Agricultural commodity futures are trading at a high premium. For example, corn futures are likely trading at a USD 0.30 to USD 0.50 per bushel premium versus the fundamentals. The question is where does the market go from here?

To start, 2026 looks much like 2025. While increasing fertilizer costs are a concern, the impact on the Northern Hemisphere crop in 2026 is limited, as most fertilizer volumes were committed and priced before the war began. Brazil is set to produce another record soybean crop (+180m mt) and a near-record corn crop (+130m mt). While the US crop is yet to be planted, US farmers are expected to plant another large corn crop in the mid-90-million-acre range and a mid-80-million-acre soybean crop, which will maintain large stocks. However, there are concerns about the 2026 wheat crop. Canada, the US Great Plains, and parts of Argentina remain dry, heat in India is a worry for the maturing crop, and conditions in the Black Sea region are mixed.

Additionally, higher fertilizer costs have Australian farmers looking for alternatives to wheat. Only western Europe is showing prospects for a good 2026 wheat crop. While 2026 will look much like 2025, concern is growing that 2027 may see reduced fertilizer application rates due to high prices, ultimately resulting in reduced yields. The length of the war will certainly have an impact on how high fertilizer prices go and the duration of the rise, but energy production and logistics infrastructure will take time to come back on line due to the damage they've suffered. The market is also watching a developing El Niño, which will likely have limited impact in the Northern Hemisphere but may result in warmer, drier conditions in the Southern Hemisphere. Stay tuned.

This is a market buffeted by two truths, but fundamentals will eventually rule the day. The expectation, assuming normal weather, is that 2026 will once again have large crops, resulting in large grain and oilseed inventories and keeping downward pressure on prices (figure 13). At the same time, the market finds underlying price support in an increasingly larger demand base (figure 12). In the end, it is a supply-driven market which will keep price rallies in check.

Figure 12: Strong foundation of global domestic disappearance

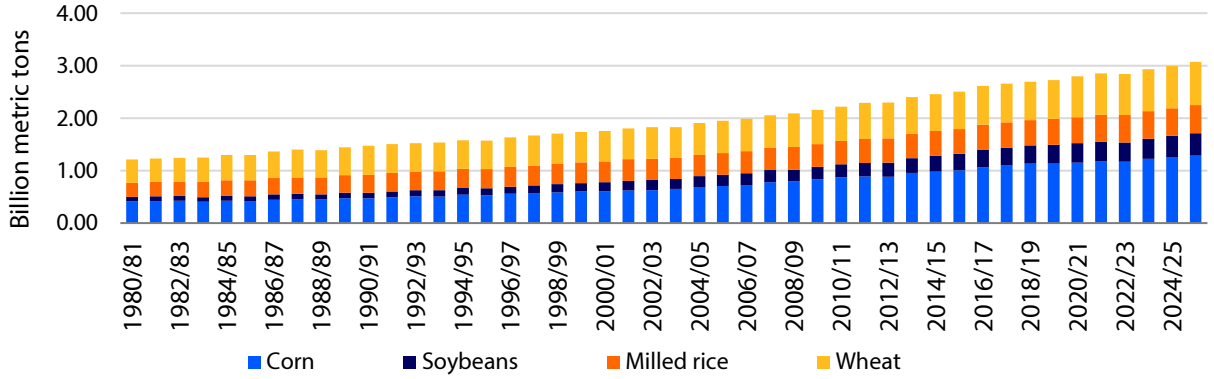
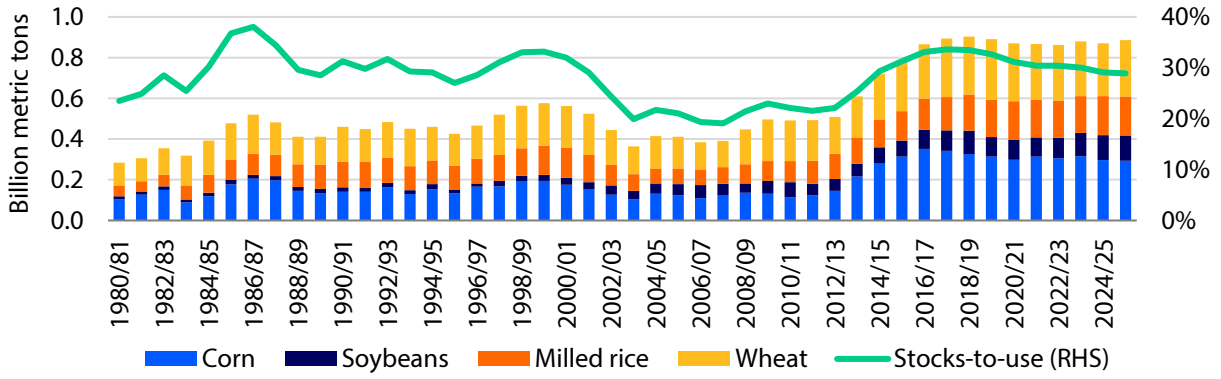


Figure 13: Near-record global stocks will keep a lid on price rallies



Source: *USDA-FAS.PSD, RaboResearch 2026*

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Africa

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North Africa strengthens its position as a critical source of nitrogen and phosphate fertilizers

The conflict in the Middle East has once again highlighted the central role of Egypt, Algeria, Nigeria, and Morocco in stabilizing global fertilizer supply. Egypt and Algeria have become critical nitrogen exporters, with urea prices rising sharply from around USD 480/mt in February to roughly USD 800/mt FOB as markets tightened (see figure 14). Algeria continues to supply northwest Europe, even as national production faces constraints from reduced natural gas feedstock, and recent urea shipments to Canada show how trade flows are shifting as Middle Eastern availability contracts. Nigeria is also strengthening its position in Atlantic markets, particularly Brazil and the US, supported by its three urea plants with a combined capacity of over 3.3m mt of ammonia and 3.2m mt of urea.

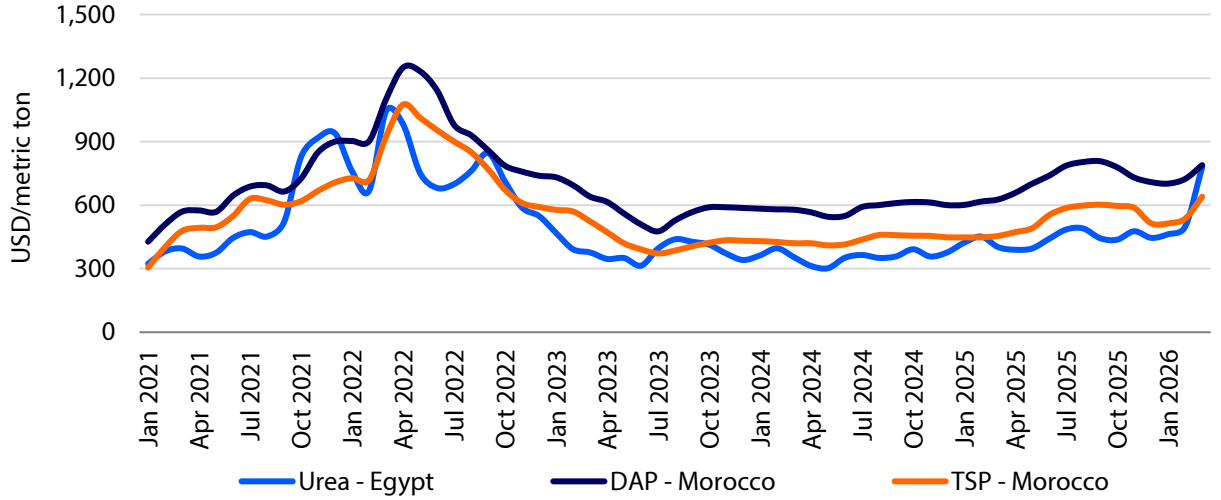
Morocco continues to anchor the global phosphate market, with limited alternative supply giving its MAP, DAP, and TSP exports strong price-setting power. DAP values climbed above USD 800/mt in March. TSP exports are increasingly prioritized due to rising prices and as no ammonia is required for production(see figure 14).

Sub-Saharan Africa faces renewed seasonal exposure to global market volatility. Between March and July, fertilizer demand peaks across much of the continent. Currently, no physical shortages have been reported, but urea prices in southeastern Africa have jumped nearly 40% and phosphates between 10% and 15%.

With memories of the 2022–2023 fertilizer crisis still fresh, securing supply and stabilizing prices has become urgent. Ethiopia is sourcing DAP through alternative routes via Yanbu to bypass restrictions at the Strait of Hormuz and is simultaneously advancing construction of its urea plant in the Gode area to reduce future import dependence. Zambia, determined to avoid past disruptions, has expanded its domestic blending and production capacity more than sixfold, putting the country on a path toward near self-sufficiency. Ghana has shifted from a subsidy scheme to free fertilizer distribution for the 2026 season, aiming to ease pressure on farmers and support higher yields, especially for staple food crops.

To prevent a recurrence of past crises, a continent-wide response mechanism, led by IFDC, Sustain Africa, AfricaFertilizer, and the African Union, has been announced. The initiative emphasizes rapid decision-making, real-time market intelligence, coordinated procurement, and synchronized regional action to keep fertilizers moving through the continent's fragile trade corridors.

Figure 14: North African urea, DAP, and TSP price dynamics, 2008-2026



Source: *CRU, RaboResearch 2026*

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Australia

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Australian grower margins under increasing pressure amid conflict in the Middle East

For Australian farmers, margin pressure has remained a key concern over the past year, and the outbreak of war in the Middle East has intensified those challenges. The conflict has again highlighted the fragility of Australia's fertilizer supply chain, with the country heavily reliant on imports for critical products such as urea and MAP.

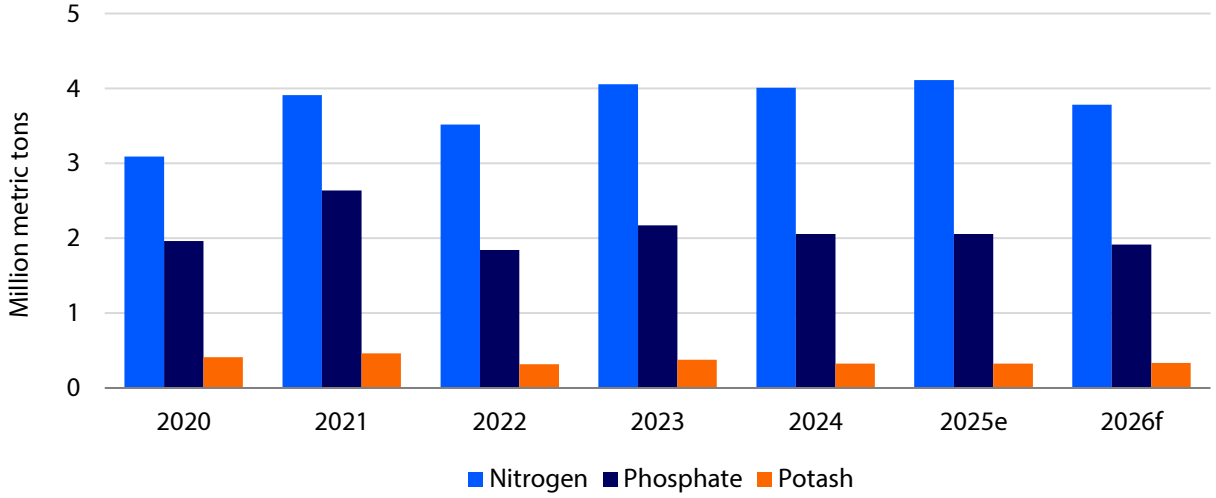
Accounting for currency movements, we estimate Middle East granular urea prices have surged an eye-watering 57% year-to-date, to around AUD 915 per metric ton, with industry feedback suggesting retail prices are sitting well above this level. Moroccan DAP FOB prices have risen a more modest 5% YTD, to approximately AUD 1,107 per metric ton, while Vancouver spot FOB potash prices have bucked the broader trend, easing by 4% over the same period.

Geopolitics aside, the Australian dollar, traditionally a key shock absorber for imported inputs, has strengthened sharply over the past 12 months. The AUD/USD cross is up nearly 12% YOY to around USD 0.70, its highest level since early 2023. Despite this currency appreciation, fertilizer import prices remain elevated due to ongoing constraints in global urea and natural gas supply chains, which means growers still feel retail price inflation. RaboResearch expects the Australian dollar to remain firm over the next year, with the cross forecast to reach USD 0.72 on a 12-month view. While further FX strength should partly offset high import prices, recent volatility in urea and phosphate markets suggests global supply and demand fundamentals will continue to exert an outsized influence on local pricing.

Against this backdrop of compressed margins, Australian farmers, driven by disappointing grain prices and elevated fertilizer costs, may increasingly favor crops that have historically demonstrated greater margin resilience under variable seasonal conditions. Barley and canola are therefore likely to gain ground relative to wheat. Barley's higher yield potential compared to wheat, along with greater flexibility in managing urea applications, may be viewed as attractive. Canola acreage remains a key variable to monitor. Canola margins have been comparatively strong versus competing crops, and prices could find additional support if oil prices remain elevated and lift biofuel demand. However, canola's high nitrogen requirements leave growers facing difficult planting decisions amid ongoing uncertainty around global urea supply chains.

Ultimately, RaboResearch expects a pronounced decline in total fertilizer consumption as growers respond to elevated prices and strategically adjust cropping rotations (see figure 15).

Figure 15: Strong consumption given recent weather



Source: *Fertilizer Australia, RaboResearch 2026*

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Brazil

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Another year of record fertilizer deliveries in Brazil is unlikely

Farmers in Brazil have continued to invest in fertilizers despite the financial challenges they have experienced for several consecutive seasons. Deliveries in 2025 exceeded projections, reaching over 49m mt (see figure 16). However, preliminary data from the 2025/26 season supports the view that farmers in Brazil are still facing significant financial challenges. This situation, coupled with the conflict in the Middle East, will make it difficult for 2026 deliveries to repeat last year's impressive performance.

For the upcoming season, our projections already suggest a potential decrease in demand due to persistently high prices. The ongoing conflict in the Middle East is also impacting fertilizer prices and introducing further risks to global supply chains, particularly for urea.

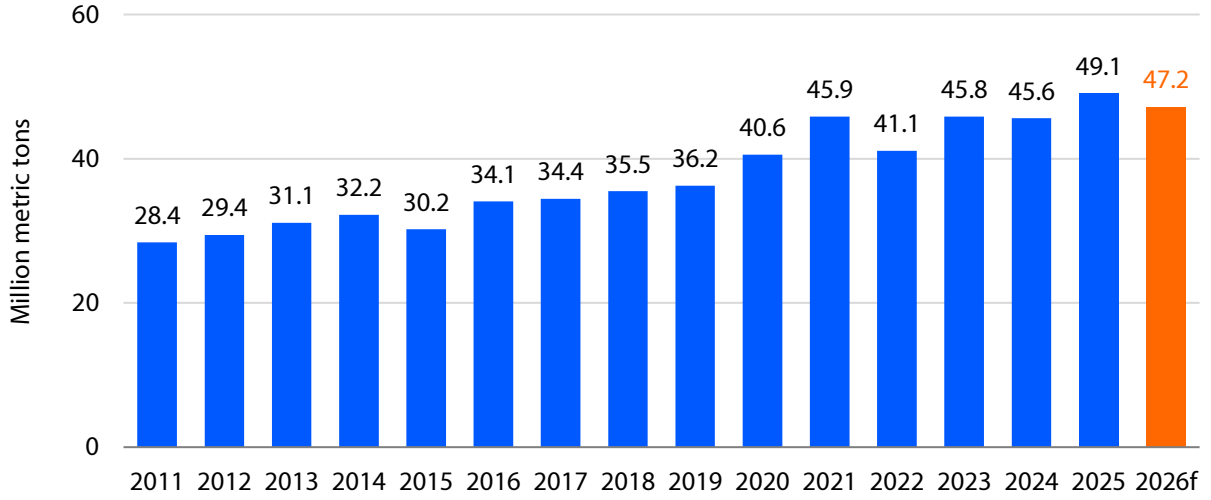
Brazil imports roughly 90% of all fertilizer used in the country. Thus, disruptions in exports resulting from the conflict are likely to impact demand, though Brazil's reliance on fertilizer imports from the Middle East has been declining. Currently, only 12% of all fertilizers imported by Brazil originate from the region. For urea specifically, 36% of last year's imports were sourced from the Middle East, a notable decrease compared to 2021, when 53% came from the area.

Historically, roughly 70% of all imported urea arrives in Brazil from May to December, so time favors Brazilian importers, but only in a context of short-lived interruptions, which doesn't seem to be the case currently. As such, Brazil could experience fierce competition for the urea volumes available in the international market, and farmers could face increased prices.

The urea market was already experiencing high prices during the first two months of 2026, and the conflict accelerated this trend. From the first week of January until March 19, urea prices at Brazilian ports increased by approximately 76%. The initial price spike following the onset of the Middle East conflict was even steeper than the price changes that occurred immediately after the start of the war in Ukraine. However, after that first week, the ongoing war in Ukraine had a greater impact on driving prices higher.

For the 2026 calendar year, RaboResearch's forecast shows Brazilian demand will drop to around 47.2m mt, a reduction of 2m mt from the 49m mt observed in 2025. Apart from all the impacts from the conflict in the Middle East, farmers' financial situation will also play an important role.

Figure 16: Fertilizer consumption in Brazil, 2010-2026f



Source: RaboResearch 2026

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China

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Domestic policy control offsets external fertilizer risks

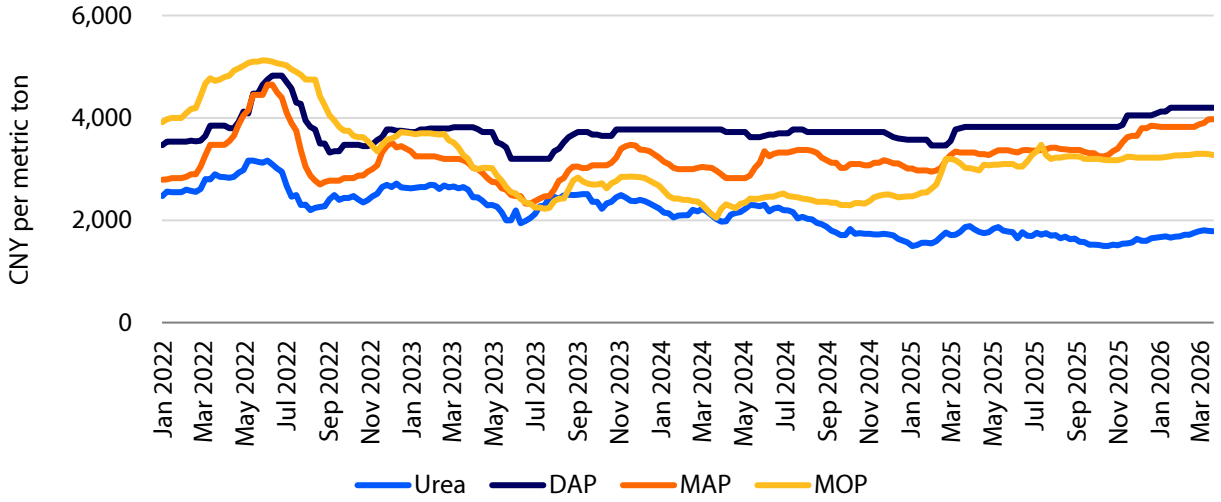
The impacts of the crisis in the Middle East and the disruptions around the Strait of Hormuz on China's fertilizer market are thought to be largely contained (see figure17), with sulfur the key exception. China is largely self-sufficient in phosphate fertilizers and in nitrogen fertilizers, which are predominantly produced from domestically sourced coal. To prioritize domestic availability, China has tightened export controls, helping to stabilize local prices and reduce exposure to Middle Eastern logistics risks. Although China remains a significant importer of potash, its primary suppliers – Russia, Belarus, Canada, and Laos – do not rely on transit through the Strait of Hormuz. As a result, China's potash supply chains are largely insulated from geopolitical disruptions in the Middle East.

China's main vulnerability lies in sulfur, where import dependence is high and Middle Eastern supply routes are more critical. As a key input for phosphate fertilizers, sulfur prices are especially sensitive to prolonged geopolitical disruption. Although inventories provide a short-term buffer, prolonged tightness risks further lifting costs and pressuring the phosphate value chain.

Since mid-March, China's nitrogen market has entered a policy-driven phase, with authorities tightening export restrictions, prioritizing domestic use, imposing ex-factory price caps, and insulating the market from global price volatility. As a result, domestic urea prices have remained stable to mildly firm, supported by seasonal peak demand and modestly higher coal costs but constrained by policy ceilings. In contrast, ammonium sulfate prices continue to strengthen, supported by limited export controls (related to its status as a caprolactam byproduct) and stronger substitution demand amid global urea tightness – fueling market speculation about potential export curbs to redirect sulfur toward domestic fertilizer use.

China has also imposed stringent export restrictions on phosphate fertilizers from mid-March to end-August to prioritize domestic availability. Although the country is largely self-sufficient in phosphate rock, phosphate prices remain elevated due to rising cost pressures, driven primarily by higher sulfur prices. Sulfur prices were already elevated prior to recent disruptions in the Middle East and have since moved higher, reflecting China's heavy import reliance on imported sulfur from the region. This has sharply reduced market liquidity, with buyers remaining cautious amid weak affordability and extended lead times. China's potash market faces pressure as strong import arrivals and continued reserve releases have raised port inventories, keeping domestic prices soft. Meanwhile, firmer international prices are widening the domestic-overseas price gap. With annual contracts settled on a CFR basis, near-term upside is limited, though upward price pressure could build later in the year.

Figure 17: Chinese fertilizer spot prices, Jan 2022-Mar 2026



Source: *CRU, RaboResearch 2026*

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Europe

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Conflict-driven supply tightness extends fertilizer affordability pressures

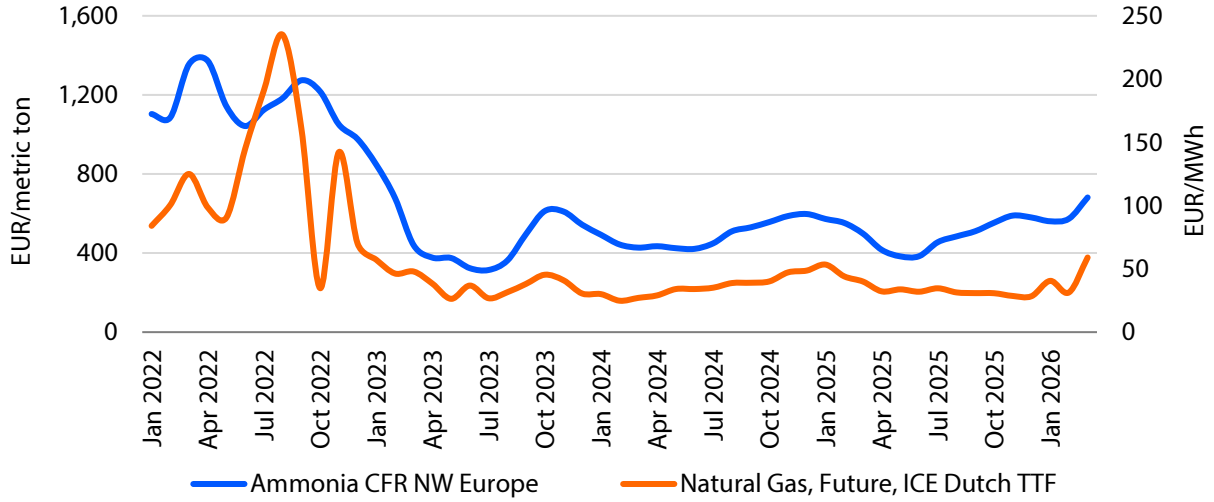
European fertilizer prices surged in March 2026 after the closure of the Strait of Hormuz halted nearly all Middle Eastern exports, resulting in tightening of global urea, ammonia, and sulfur supply. Even though Europe sources only limited volumes from the affected region, the price impact on the region was immediate. Urea rose about 40%, in line with the global increase of nearly 50% from pre-conflict levels. Nitrates followed with gains of 15% to 20%, while ammonia increased by 12%.

Europe's import options for nitrogen products have become increasingly constrained. Algeria and Egypt remain the primary suppliers of urea and ammonia to the EU, but both face risks linked to gas availability and potential production curtailments. Russia has reentered the European market despite higher EU tariffs, but its export capacity is limited by operational issues, including the outage at Dorogobuzh, drone strikes in Cherepovets, and a suspension of ammonium nitrate exports due to restrictions.

EU policymakers are seeking to ease market pressures by proposing a temporary suspension of most-favored-nation (MFN) duties on key nitrogen fertilizers and inputs, including ammonia and urea. The measure would apply for all countries except Russia and Belarus. While this may offer some cost relief, it is unlikely to significantly alter supply patterns, aside from modest competitiveness gains for exporters such as Algeria, Egypt, Uzbekistan, and potentially Nigeria. At the same time, the EU's Carbon Border Adjustment Mechanism remains in force, requiring importers to account for embedded carbon emissions, on top of rising transport and insurance costs.

The tightening of external supply routes confirms the strategic relevance of domestic fertilizer production. However, rising natural gas prices potentially threaten the cost competitiveness of European producers (see figure 18). This vulnerability became evident when Duslo in Slovakia reduced ammonia output due to escalating gas costs. While inventories remain sufficient for the current crop cycle, risks are shifting toward the 2026 fall planting season, if sustained supply disruptions and elevated energy prices persist. For farmers, fertilizer affordability is now the primary concern. Nitrogen fertilizer prices were already more than 20% higher at the start of 2026 compared to 2025, and the conflict-driven surge has further widened the gap between fertilizer and crop prices. Farmers are expected to reduce application rates, switch between nitrogen products based on relative pricing, and shift away from nitrogen-intensive crops, such as corn, toward soybeans and other legumes. In the medium term, fertilizer prices are likely to remain structurally elevated. The fertilizer value chain, including farmers, needs to diversify sourcing, rethink inventories, and prepare for sustainably higher operational costs.

Figure 18: European natural gas vs. ammonia prices, Jan 2022-Mar 2026



Source: *CRU, ICE, RaboResearch 2026*

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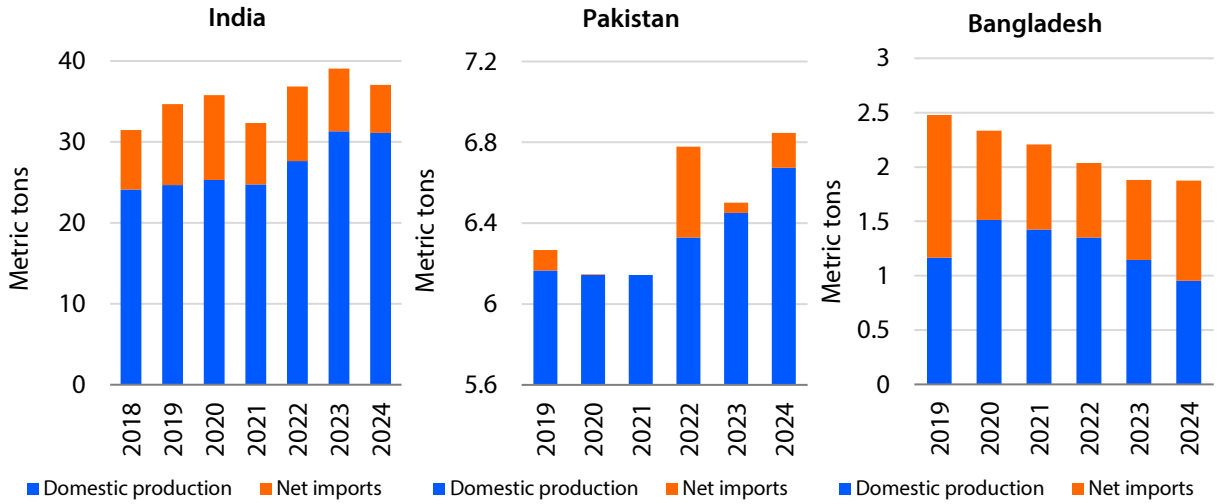
Indian, Pakistan, and Bangladesh will be key areas of concern in the coming months

Some of the biggest disruptions resulting from the direct and indirect consequences of the Iran war risk playing out in India, Pakistan, and Bangladesh. For these countries, it is not just the direct consequences of the temporary inactivity of a key fertilizer-supplying region, it is also the region's significance as a feedstock supplier for domestic urea production. The timing of this conflict could hardly have been worse for India's urea supplies. RCF tenders issued in February were instantly on shaky ground, given the slew of force majeures issued at the onset of the conflict. The expectation of India returning to the tender market in April preceded the conflict. However, even with a tender only debated at this point, the price point could be at a USD 300/mt premium to January tenders. India imported a little over 10m mt in 2025, with expectations of a lesser but still significant import agenda in 2026, particularly given tight domestic inventories.

Things only appear to be getting worse. Not only are these countries increasingly focused on supply from the Middle East given China's absence from the market, but domestic energy supplies are compounding the issue. Rationing of domestic energy supplies has forced utilization rates for domestic production down to ~70%. Even assuming the conflict ends soon, the strength of Indian urea demand in the second half of the year is going to sustain market tightness. Beyond India, which is the largest urea-deficit country, Pakistan and Bangladesh also represent a significant problem (see figure 19). Among the first to curtail production after the conflict's outbreak, they risk being short of urea in 2026. These were the indirect consequences of the conflict, yet even these would not constitute the "fat tail" of risk outcomes. Pakistan relies on Qatar to supply roughly 99% of its LNG demand, while for Bangladesh it is above 60% and India is just shy of 50%. In the case of Pakistan, short gas supplies and curtailed production risk a country of neutral supply and demand pivoting into a deficit country at a time when many of its key urea suppliers are trapped or out of the market.

Phosphates are another headache for the region. India imports between 5m and 6.5m mt of DAP, with an increased reliance on Saudi Arabian supplies, as China reduced its supply to the global market. We have seen suppliers as far away as the US commit to April delivery to India – a reflection of just how tight the global market is. India's domestic phosphate production is not insulated from second-order impacts either. India produces between 40% and 45% of domestic DAP consumption, requiring ~2m mt of sulfur imports. With ~48% of global sulfur exports trapped behind the Strait of Hormuz and Russia still absent from the global market, sulfur prices are still going in the wrong direction amid tight supply. Many risks are on the horizon for this region.

Figure 19: Domestic urea production and imports, 2019-2024



Source: CRU, RaboResearch 2026

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US and Canada

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2027 planting also faces significant cost risk

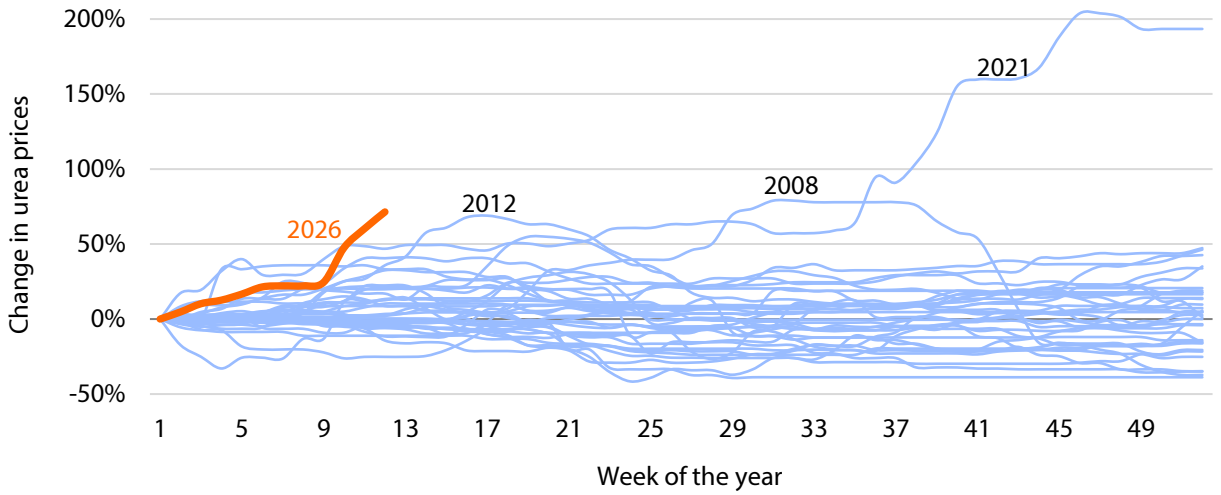
Affordability concerns were front of mind for US growers ahead of the current conflict in the Middle East. The reported demand for fall phospahtes was down ~20% YOY, as countervailing duties and International Emergency Economic Powers Act tariffs had contributed to phosphate affordability rising to levels not seen in 17 years. The Iran conflict has had greater effects still on the nitrogen complex. Rising ~70% since the start of the year, inland wholesale urea prices have added as much as USD 35/acre to the cost of producing corn in some of the most intensive systems. These factors, combined with higher energy costs and specifically diesel costs, suggest this conflict has quite severly impacted the outlook for US growers.

However, timing has been a mitigant. Many commitments and decisions were made prior to the conflict's onset on February 28. The US requires ~5m mt of urea imports to meet domestic demand, with close to 20% of those volumes coming from Qatar, with the risk that anticipated volumes were caught in the flurry of force majeures and trapped behind the Strait of Hormuz. While the US may not reach its full complement of imports, the consequences may not be as dire as headlines suggest. Despite the US' greater self-reliance in UAN and anhydrous, the urea rally has bled into these prices, which have shown close to 20% and 10% increases, respectively, at the retail level.

Still, the true jeopardy may lie ahead for US growers. The elevated sulfur price has further eroded the stripping margins of domestic phosphate producers, while export arbitrage opportunities to India and Brazil have likely attracted volumes from the US in an already tight domestic market. DAP and MAP prices have been slower to react to the conflict, despite the exposure of close to 20% of global finished phosphate exports to the Strait of Hormuz. Any US phosphate volumes leaving the domestic market may be sorely missed come fall, if this conflict persists and global sulfur prices force further curtailment of marginal producers. Of all the projections we had coming into 2026, the one that remains intact following the conflict's outbreak is that 2026 phosphate prices are likely to be comparable to or higher than 2025 for US growers.

The fast rise in 2026 urea prices (see figure 20) in North America may not see the aggressive reversion to mean prices expected in the second half of Q2. Certainly, this should not be expected if the conflict persists. With material volumes removed from the global balance sheet, contagion risk remains constant, given pent-up demand from the likes of India and what is likely to remain a sustained war risk premium to global exports that may eventually pass through the strait. Even if beggar-thy-neighbor strategies, which could yet come into play, are eschewed, the mechnisms to return prices to pre-conflict levels any time soon do not appear to be in place. Absent a robust increase in global agri commodity prices, affordability will be a key topic in 2027 too.

Figure 20: Change in urea prices, 1991-2026



Source: IFA, RaboResearch 2026

RaboResearch Food & Agribusiness

Semiannual fertilizer outlook

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