

FERTILIZER MARKETS MONITOR

Overview

date

4/1/2021



4/1/2026



Last update

4/1/2026

Source: World Bank Pink Sheet



UREA

\$857

Latest Price

Price YoY % 11.1%

DAP

\$725

Latest Price

Price YoY % 11.4%

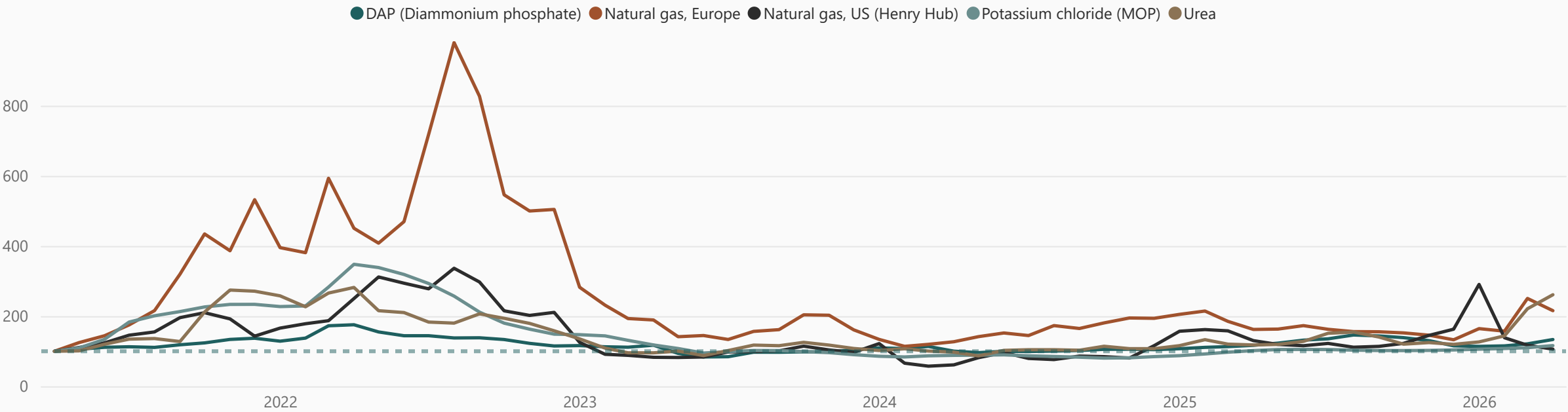
POTASH

\$401

Latest Price

Price YoY % 4.8%

Indexed price evolution (base 100)



FERTILIZER MARKETS MONITOR

Nitrogen Margin Drivers

date

1/1/2010



4/1/2026



Last update

4/1/2026

Source: World Bank Pink Sheet

Urea (\$/mt)

\$857

Latest Price

Henry Hub (\$/MMBtu)

2.8

Latest Price

TTF (\$/MMBtu)

15.4

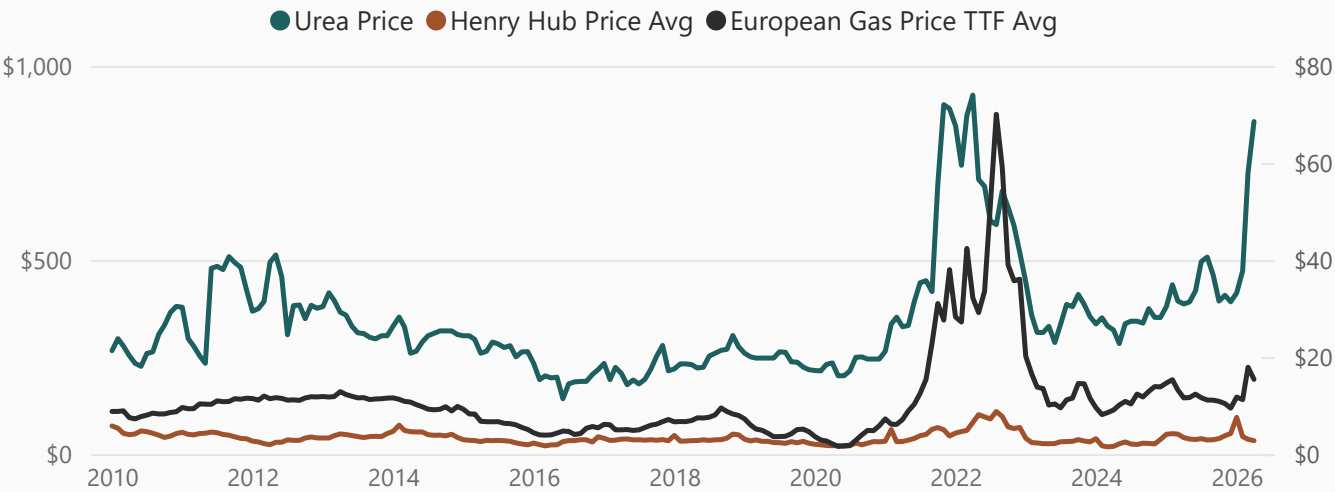
Latest Price

EU-US Gas Spread (\$/MMBtu)

12.6

Gas Spread EU-US

Urea price vs. US and European natural gas benchmarks

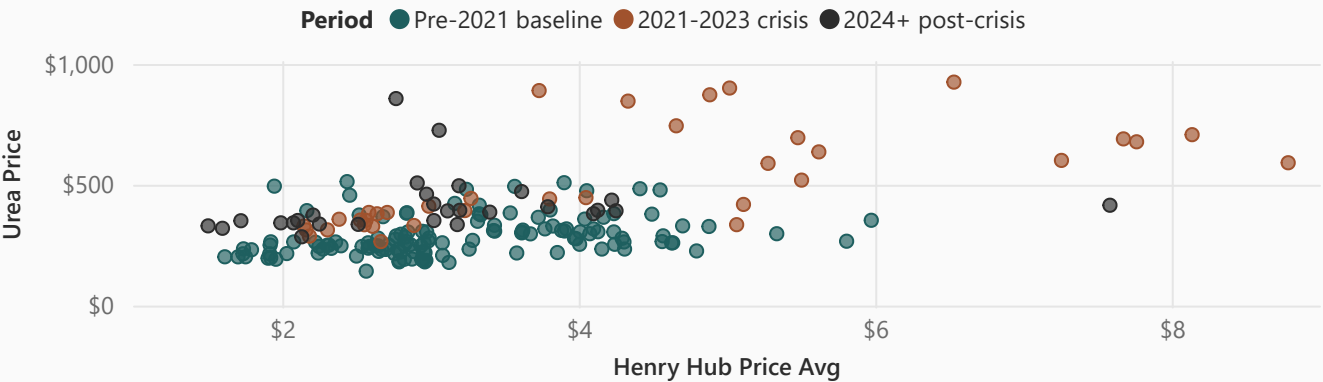


Urea is processed natural gas: ~80% of variable cost is feedstock. Two benchmarks drive nitrogen margins — Henry Hub (US) and TTF (Europe, the marginal producer). The EU–US spread was historically narrow, then exploded in the 2022 energy crisis with TTF at **5–10x** Henry Hub. The scatter shows 2021–2023 observations falling off the urea/Henry-Hub trend line — evidence that European gas was driving global urea pricing.

The dislocation reshaped trade flows: US producers captured export share, several European plants closed permanently, and EU–US gas remains the most-watched spread in nitrogen equity research.

Urea vs Henry Hub gas - pricing relationship by period

Before 2021 urea tracks Henry Hub tightly; the 2021–23 cluster breaks away, priced off European gas instead



Urea/Gas Ratio

102.90

Card shows the slicer-period average. Long-run baseline (2000–2020): ~85; readings above **150** signal exceptional margin windows. Apr 2026 (~310) marks a historical extreme — comparable only to the 2008 and 2022 spikes.

FERTILIZER MARKETS MONITOR

Phosphate Margin Drivers

date

3/17/1967



4/1/2026



Last update

4/1/2026

Source: World Bank Pink Sheet

DAP (\$/mt)

\$725

Latest Price

Phosphate Rock (\$/mt)

152.5

Latest Price

DAP-PhosRock Spread (\$/mt)

\$572.8

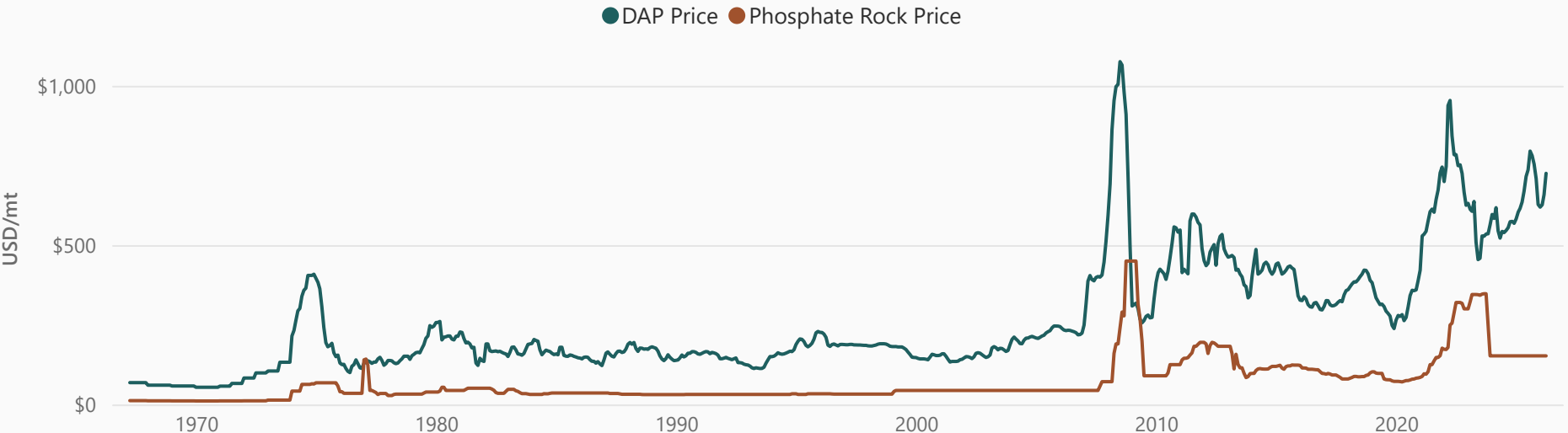
DAP-PhosRock Spread Latest

Spread vs. Hist %

198%

DAP-PhosRock Spread vs Hist

DAP & Phosphate Rock - Monthly USD/mt



DAP-PhosRock Spread - Processing Margin Proxy

Shaded area= spread; dashed line: long-run average



DAP is processed phosphate rock plus ammonia and sulfuric acid; the DAP-PhosRock spread proxies the processing margin captured by integrated producers (Mosaic, OCP, Nutrien). World Bank PhosRock prices reflect OCP/Morocco contract pricing, not spot — explaining both the **-\$141/mt** anomaly of Jan 2009 (DAP collapsed post-Lehman faster than contract rock could re-rate) and the flat **\$152.50/mt** benchmark since late 2023.

At **+198%** above its long-run average, the current spread is structural, not speculative: Russia/Belarus sanctions, China export curbs, and resilient Asian demand have tightened the market without 2008's inventory overhang.

FERTILIZER MARKETS MONITOR

Potash - Market Dynamics

date

3/23/2006



4/1/2026



Last update

4/1/2026

Source: World Bank Pink Sheet

MOP (\$/mt)

\$401

Latest Price

MOP last 12 month avg (\$/mt)

\$365

Price 12M Avg

MOP YoY %

2.9%

Price YoY %

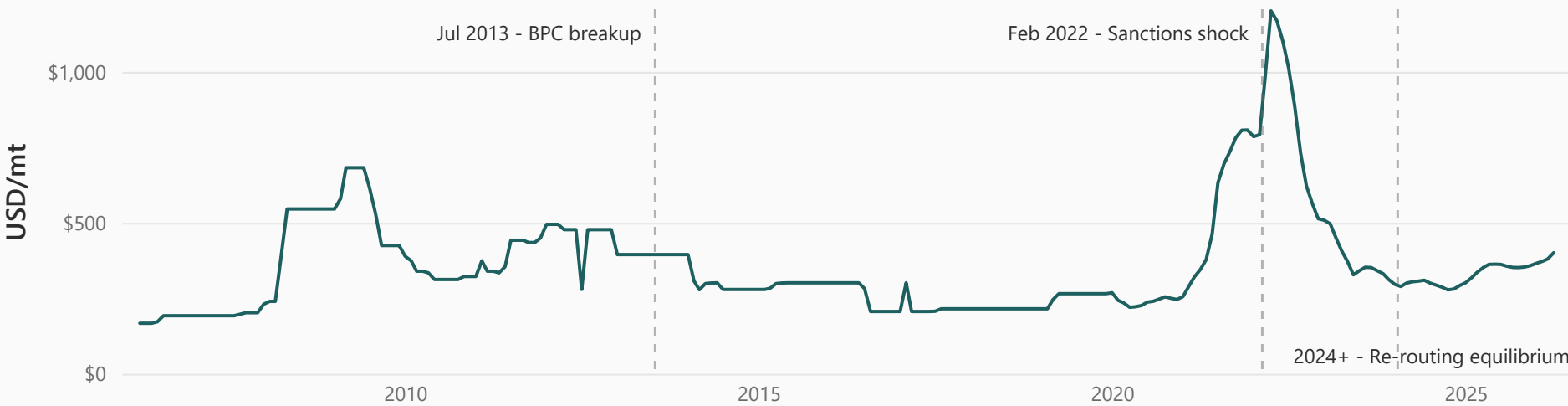
MOP historical percentile %

85.2%

Historical Percentile

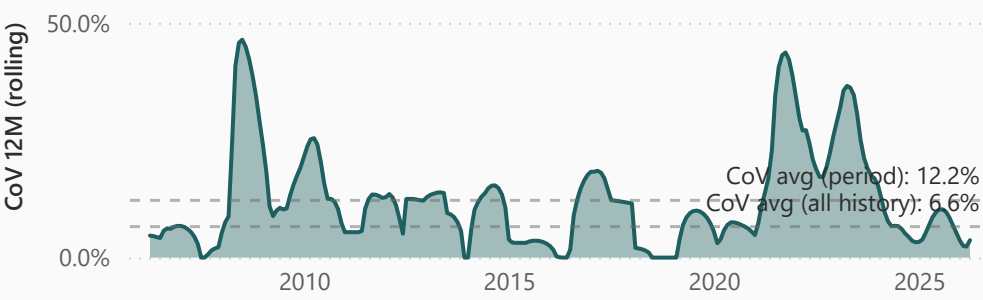
MOP Price - supply shock chronology

Standard MOP, FOB Vancouver



MOP price volatility - 12-month rolling CoV

Cartel discipline shapes the rhythm; cartel disruptions drive the spikes



Potash supply is highly concentrated: BPC (Belaruskali + Uralkali) and Canpotex (Nutrien + Mosaic) historically governed ~70% of seaborne trade. The **July 2013 BPC breakup** ended coordinated discipline, triggering a supply overhang and multi-year price decline. The FOB Vancouver benchmark (Canpotex pricing) absorbed this gradually versus spot Baltic markets.

February 2022 sanctions on Belarus and Russia (~40% of supply) imposed export restrictions, and the price **more than doubled** in four months. Re-routing through Pacific and Chinese channels restored volumes by 2024; MOP now trades at **\$401/mt — 85th historical percentile**.

FERTILIZER MARKETS MONITOR

Volatility across the NPK System

date

3/17/2010

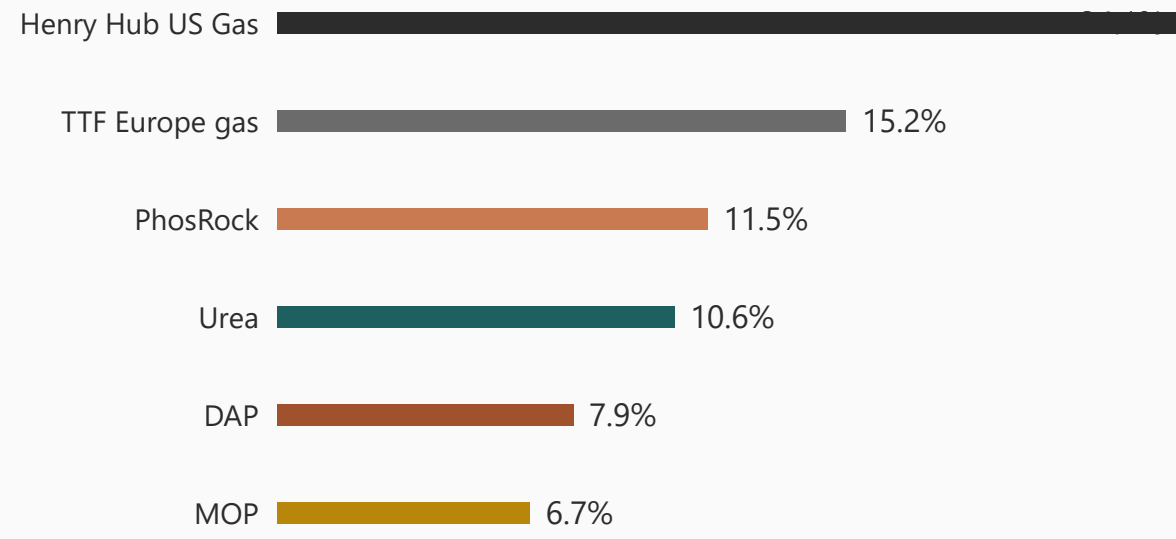
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Last update

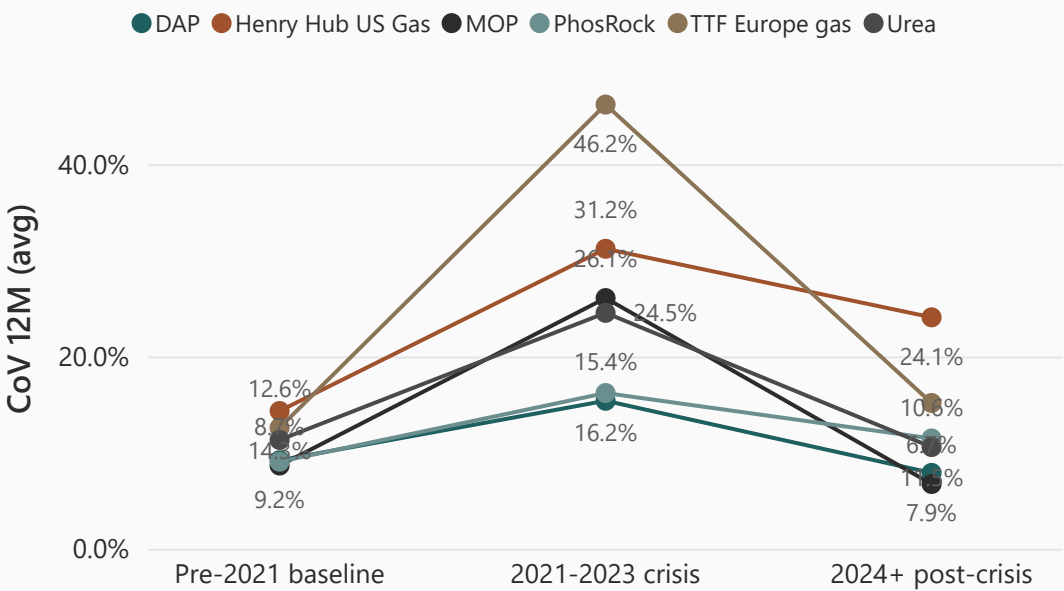
4/1/2026

Source: World Bank Pink Sheet

Average rolling 12M CoV, 2024+



Volatility shift across regimes



Across the NPK system, volatility displays a clear hierarchy. Henry Hub holds the highest pre-crisis baseline (16.2%) and the most persistent post-shock elevation — at 24.1% today, it remains the only commodity whose 2024+ volatility sits above all others' pre-2021 baseline. TTF traces a different shape: a calm baseline of 12.6% that exploded to 46.2% during 2021-2023 (the steepest regime break in the dataset, 3.7× baseline) and has not fully reverted — 15.2% today, still above its pre-2021 level.

Within fertilizers, volatility patterns differ markedly. Urea's peak crisis CoV of 24.5% — roughly half TTF's amplitude — has since fallen to 10.6%, below its pre-2021 baseline. DAP and phosphate rock show the smallest reactions in the panel, with crisis-to-baseline multipliers of 1.2× (DAP, 13.2% → 15.4%) and 1.1× (PhosRock, 14.4% → 16.2%). DAP's manufacturing inputs include rock, ammonia, and sulfur — a more diversified cost base than upstream rock — while the World Bank's PhosRock benchmark reports OCP contract pricing rather than spot.

MOP's profile stands out in the dataset. It carries the lowest pre-2021 baseline of any commodity tracked (10.2%) yet the second-largest crisis multiplier in the panel (2.6×, to 26.1%) when sanctions disrupted ~40% of supply. The market combines high supplier concentration — fewer than four producers control most of seaborne trade — with acute geopolitical exposure to Russia and Belarus. In 2024+, MOP settled at 6.7%, well below its own baseline, as Belarus and Russia re-routed exports through new channels.

Key takeaways	01. Gas is the structural anchor of the nitrogen complex Henry Hub carries the highest baseline volatility of the six series (16.2% pre-2021) and remains high post-crisis (24.1%); urea inherits this energy signal, moderated by agricultural demand.	02. The 2021-2023 break was a gas-led shock, unevenly transmitted TTF posted the most violent move in the panel - 12.6% to 46.2% rolling CoV, a 3.7x jump - and has not returned to its pre-crisis baseline.	03. Phosphate is the system's shock absorber DAP and phosphate rock barely move through the crisis (DAP 13.2% TO 15.4%); diversified cost inputs and contract pricing damp volatility transmission.	04. Potash shows the cartel signature MOP has the lowest baseline of the six (10.2%) yet the largest relative crisis spike (2.6x) and a post-shock floor below baseline (6.7%) - calm routine, amplified shocks.
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Conclusions

Co-movement & regime diagnosis

Across the panel, the six series move largely independently in calm periods but **converge under systemic stress** — co-movement itself functions as a regime diagnostic. The 2021–2023 window is the clearest case: nitrogen, potash and both gas benchmarks spiked together not because their fundamentals aligned, but because a **common shock** — energy costs compounded by geopolitics — overrode commodity-specific dynamics. The most persistent legacy is the **EU–US gas spread**, which widened during the crisis and remains structurally elevated (~\$**12.6/MMBtu**, Apr 2026) — a regional divergence, not a transient dislocation.

Current state (April 2026)

As of April 2026: **Urea \$857/mt**, with the urea-to-Henry-Hub ratio at a historical extreme (~**310** vs a ~**85** long-run baseline); **MOP \$401/mt**, at the **85th historical percentile**; the **DAP–phosphate-rock processing spread at +198%** of its long-run average — driven almost entirely by DAP, as the phosphate-rock benchmark has held flat at \$152.50/mt for 15 months.

Watched indicators

Three structural factors have historically driven the dislocations documented in this report. They are **observable conditions, not directional forecasts**:

- **EU–US gas spread** — the most-cited driver of nitrogen producer competitiveness; CME lists a tradable Henry Hub–TTF spread future, and Argus tracks a European-nitrogen-to-TTF ratio as a margin benchmark.
- **Potash supply discipline** — ~70% of export capacity sits with three blocs (Canpotex, BPC, Russian producers); analysts watch capacity utilization (>85–90% tightens the market) and the China/India benchmark settlements.
- **Phosphate contract-vs-spot dynamics** — the OCP/Morocco rock benchmark lags spot, so the processing spread is a DAP signal more than a rock signal.

These are structural conditions historically associated with price dislocations, included for context — not a directional view.

Data Sources

[World Bank Commodity Markets \(Pink Sheet\)](#)

Series	Code	Unit	Role in report
DAP	DAP	\$/mt	Phosphate benchmark
Phosphate rock	PHOSROCK	\$/mt	Phosphate feedstock
Potassium chloride (MOP)	POTASH	\$/mt	Potash benchmark
Urea	UREA_EE_BULK	\$/mt	Nitrogen benchmark
Natural gas, Europe ("TTF")	NGAS_EUR	\$/MMBtu	Regional gas spread
Natural gas, US ("Henry Hub")	NGAS_US	\$/MMBtu	Nitrogen feedstock

Metric Definitions

- **Indexed (Base 100)** — each series rebased to 100 at the chart's start date, so commodities on different price scales share one axis and only relative moves are compared.
- **MoM % / YoY %** — month-over-month and year-over-year change of the latest available month.
- **Historical Percentile** — where the latest price sits within its own full history (0–100%); 85% = higher than 85% of all months on record.
- **Coefficient of Variation (CoV, 12M)** — rolling 12-month standard deviation ÷ rolling 12-month mean. Unit-neutral, so volatility is comparable across commodities.
- **Spread (DAP – Phosphate rock)** — processing-margin proxy: the gap between finished phosphate and its rock feedstock.
- **Rolling 12M correlation** — co-movement between commodity pairs over a trailing 12-month window.

Caveats and Limitations

- **Phosphate rock is contract-priced.** The Pink Sheet rock benchmark reflects OCP/Morocco contract pricing, which lags spot. This explains the –\$141/mt DAP–rock spread in Jan 2009 and the flat rock benchmark since late 2023 — rock-derived metrics are unreliable over short windows.
- **MOP is FOB Vancouver (Canpotex).** The potash benchmark tracks Canpotex (Vancouver) pricing, structurally more disciplined than Baltic spot. Industry claims that "MOP halved after the 2013 BPC cartel breakup" describe Baltic, not this series.
- **European gas is a Pink Sheet benchmark, not ICE TTF.** Where charts label "TTF", the underlying series is the Pink Sheet "Natural gas, Europe" reference — directionally aligned with TTF but not the exchange-traded contract.
- **CoV boundary effects.** Rolling 12-month windows straddle regime boundaries, so period-edge CoV values blend two regimes; read regime-level volatility from the period averages, not single edge months.
- **Descriptive, not predictive.** This report characterises the current state of each market relative to its history. It makes no forward-looking price forecasts.

Sources Cited

- Gas-spread catalyst — [CME Group Henry Hub–TTF spread futures](#).
- Potash market structure — Canpotex / former BPC (Belaruskali–Uralkali) oligopoly literature.
- NPK demand economics — agricultural-economics literature on nutrient complementarity and near-zero cross-price elasticities.egime boundaries, so period-edge CoV values blend two regimes; read regime-level volatility from the period averages, not single edge months.