

Global Fertilizer Trade Toolkit

Premium Trade Analytics - 1990-2023

FAOSTAT Detailed Trade Matrix - Published by TW Policy Group

1.

What you can do with this dashboard

The dashboard gives a dynamic picture of global fertilizer trade from 1990 to 2023, covering 190 reporter countries, 27 fertilizer products, and bilateral flows worth over \$3.8 trillion in cumulative value. It helps you assess import dependency, map trade corridors, track exporter concentration, and turn indicators into strategic procurement, supply-chain, and trade-policy options.

- See the latest year's trade values and how they changed versus last year (YoY), the last 3 years (3-year CAGR), and the last 5 years (5-year CAGR).
- Understand structure: top reporter, top partner, Top-3 share, and concentration (CR5 for partners, PC5 for products).
- Track trade balance: exports minus imports at reporter level, with net positions tracked over time.
- Scan emerging export products: CAGR-ranked growth leaders across 3Y / 5Y / 10Y horizons.
- Identify untapped opportunities: products a reporter exports globally but does not yet ship to a selected partner.
- Filter by Reporter, Partner, Product, Year, Trade Flow, and Horizon to tailor the view.
- Use Country Summary for key metrics and trade signal cards for decision-ready indicators.
- Review Structural Notes for full methodology and formula transparency.

Tip: The dashboard is selection-aware: labels, shares, rankings, and signals switch automatically with your slicers.

2.

Quick start

Start on the Global view to see the world fertilizer trade baseline across all reporters and partners.

- (Optional) Select filters: a Reporter, a Partner, a Product, a Year, a Trade Flow (export/import), or a Horizon (3Y/5Y/10Y).
- Read the Country Summary: total trade, export/import values, trade balance, top partners, top products, and concentration metrics.
- Review Top Trade Partners bar chart: current-year values with YoY change arrows.
- Scan Emerging Export Products: CAGR-ranked growth leaders with world CAGR comparison.
- Check Competitive (Surplus) Products and Untapped Opportunities when a partner is selected.
- Open Structural Notes for full formula and methodology transparency.

Tip: Start broad (Global), then add one filter at a time. The chips row under the header confirms all active selections.

3.

Layout tour

- Header bar - title, data source (FAOSTAT Detailed Trade Matrix), and branding.
- Slicers (left panel) - Year, Reporter Countries, Product, Partner Countries, Horizon.

- Country Summary - ExportValue, ImportValue, TotalTrade, TradeBalance, Status (Surplus/Deficit), ShareOfWorldExport, ShareOfWorldImport, Export Change.
- Top Trade Partners (bar chart) - top-5 partners by current trade value with YoY indicators.
- Top Traded Products - top-5 fertilizer products by trade value with share of total.
- Emerging Export Products - CAGR-ranked growth leaders across 3Y/5Y/10Y with world CAGR comparison.
- Competitive (Surplus) Products - products where ExportValue exceeds ImportValue or is close to parity.
- Untapped Opportunities - products the reporter exports globally but not yet to the selected partner (requires partner selection).
- Structural Notes (accordion) - full definitions, formulas, and interpretation rules.

4.

The slicers and what they do

Reporter

Select a single country for a national fertilizer trade profile: total exports, imports, trade balance, share of world exports, top partners, and top products. Select multiple reporters to compare.

Partner

Select one or more partner countries. Adds Untapped Opportunities showing fertilizer products the reporter exports globally but not yet to this partner.

Product

Filter by one or more of the 27 FAOSTAT fertilizer products. Use to assess commodity-level dependency, exporter concentration, and product-specific market behavior.

Year

The dataset covers 1990-2023 (33+ years). Latest 1-2 years should be treated as provisional until FAO reconciles all country submissions.

Trade Flow

Filter by Export Value or Import Value for directional analysis. Separate export competitiveness from import dependency for supply-chain and procurement diagnostics.

Horizon

Select 3Y, 5Y, or 10Y for the Emerging Export Products CAGR calculation. Shorter horizons surface recent acceleration; longer horizons reveal structural trade shifts.

Tip: All slicers support multi-select. Use Ctrl/Cmd-click to select more than one.

5.

Country Summary - how to read it

- ExportValue / ImportValue: total export and import values in USD for the selected scope.
- TotalTrade: ExportValue + ImportValue.
- TradeBalance: ExportValue minus ImportValue. Positive = surplus (net exporter); negative = deficit (net importer).
- Status: 'Surplus' if TradeBalance \geq 0, else 'Deficit'.
- ShareOfWorldExport / ShareOfWorldImport: reporter's share of world total (REMOVEFILTERS).
- Export Change (Min-Max Years): (ExportEnd minus ExportStart) / ExportStart for the selected year range.

6.

Trade signal indicators

Top Trade Partners

- Current value: $\text{Sigma}(\text{Value}) \times 1000$ at Year = MaxYear.
- YoY%: $(\text{Current} - \text{Prior}) / \text{Prior}$, shown as up/down arrows.
- Top 5 partners by Current; bar width proportional to share of top-5.

Top Traded Products

- TOPN(5) over fertilizer products by trade value within the selected scope.
- PC5 above 60% signals high product concentration - common for nitrogen-based fertilizer exporters.

Emerging Export Products (CAGR)

- StartYear: MaxYear minus N (N = 3, 5, or 10 from the Horizon slicer).
- CAGR: $(\text{EndVal} / \text{StartVal})^{(1/N)}$ minus 1.
- WorldCAGR: computed with REMOVEFILTERS(Reporter) for comparison.
- Display Top 15 by CAGR; overflow listed via '+N more'.

Competitive (Surplus) Products

- $\text{ExportValue}(\text{product}) > 0$ at MaxYear.
- Keep if $\text{ExportValue} \geq \text{ImportValue}$ OR gap is within 20% of ImportValue.
- Rank by ExportValue; shows Top 15 plus overflow tooltip.

Untapped Opportunities

- Products the reporter exports globally AND the partner imports from elsewhere, but not yet from each other.
- Display Top 30 alphabetically. Requires a partner to be selected.

7.

Common analysis recipes

- Country trade profile: select reporter -> Country Summary -> Top Partners and Top Products -> check trade balance.
- Import dependency review: filter Trade Flow = Import -> Top Products and partner concentration -> assess supply-chain risk.
- Exporter concentration check: select a product -> review CR5 -> flag dependency on narrow supplier set.
- Trade corridor mapping: select reporter + partner -> bilateral fertilizer flows -> review Untapped Opportunities.
- Procurement planning: select reporter + major supplier -> product-level trade values -> track YoY changes.
- Long-run structural shift: select 10Y horizon -> Emerging Exports CAGR -> identify countries reorienting fertilizer trade.
- Input security assessment: review global CR5 for strategic products -> flag high concentration and low domestic production.
- Negotiation brief: select reporter + partner -> bilateral summary + Competitive Products + Untapped list -> export for delegation.

8.

FAQs

Q: Nothing shows in the chips.

A: Expected on the default global view. Select at least one filter.

Q: Trade values seem low.	A: FAOSTAT source unit is 1000 USD. The dashboard multiplies by 1000 for display.
Q: Why do some countries have missing years?	A: FAOSTAT reflects country submissions. Gaps are preserved to avoid false precision.
Q: How do I reset to the global view?	A: Clear all slicers using the eraser icon or Ctrl/Cmd-click.
Q: Untapped Opportunities shows nothing.	A: Requires a partner to be selected. It shows products the reporter exports globally but not yet to that partner.
Q: Can I compare multiple reporters?	A: Yes. Select several in the Reporter slicer; charts reflect the combined selection.
Q: Numbers differ from national statistics.	A: FAOSTAT uses its own reconciliation. Ensure matching scope before comparing.
Q: CAGR shows 'n/a' or very large values.	A: CAGR requires non-zero StartVal. Small trade bases can produce extreme rates - check absolute values first.
Q: I need exact numbers.	A: Hover charts for exact values. Country Summary also shows precise figures.

9.

Good practice for responsible use

- Use trade signals to prioritise questions and frame procurement and supply-chain strategy; do not replace national trade statistics.
- When CR5 is high and TradeBalance is deteriorating, prioritise supplier diversification before major procurement commitments.
- Read Structural Notes to understand formulas, eligibility thresholds, and formatting conventions.
- For presentations, pair Country Summary with the Top Partners bar chart and Emerging Exports.
- Redistribution is permitted with clear attribution to FAOSTAT Detailed Trade Matrix (c) FAO and (c) TW Policy Group.
- Caveat: Trade data reflect country submissions and may differ from national trade accounts.
- No endorsement. FAO does not endorse any findings or interpretations. Any errors are the sole responsibility of TW Policy Group.

10.

Structural Notes - Methods & Considerations

Acronyms & Symbols

YoY	Year-over-Year growth.
CAGR	Compound Annual Growth Rate.
CR5	Top-5 partners' share of total (partner concentration).
PC5	Top-5 products' share of total (product concentration).
TM	FAOSTAT Detailed Trade Matrix.
TOPN(k)	Top-k ranking function used for partners and products.
K/M/B/T	Thousands / millions / billions / trillions (USD).
ppt	Percentage points (used for share changes over time).

Core computation rules

- Selection scope: All shares and signals computed over the current on-screen selection.
- Source unit: 1000 USD. Display values multiply by 1000.
- ExportValue: $\text{Sigma}(\text{Value}) \times 1000$ where Element = 'Export Value'.
- ImportValue: $\text{Sigma}(\text{Value}) \times 1000$ where Element = 'Import Value'.
- TotalTrade: ExportValue + ImportValue.
- TradeBalance: ExportValue minus ImportValue.
- ShareOfWorldExport: $\text{ExportValue} / \text{WorldExportTotal} (\text{REMOVEFILTERS}([\text{Reporter Countries}]))$.
- CAGR: $(\text{Vend}/\text{Vstart})^{(1/n)}$ minus 1 with guards against zero bases.
- Eligibility: Indicators hidden where reporter has fewer than 3 reporting years or fewer than 5 active partners.
- Zero/blank guards: Metrics show 'n/a' when inputs are blank.

Scope & limitations

The FAOSTAT Detailed Trade Matrix covers 190 reporter countries, 27 fertilizer products, and 33+ years (1990-2023). This toolkit is limited to fertilizer-specific FAOSTAT commodity codes. Pair with national customs data, IFA statistics, and qualitative market intelligence for final policy design.