



What is Happening with **N** **P** **K** ?

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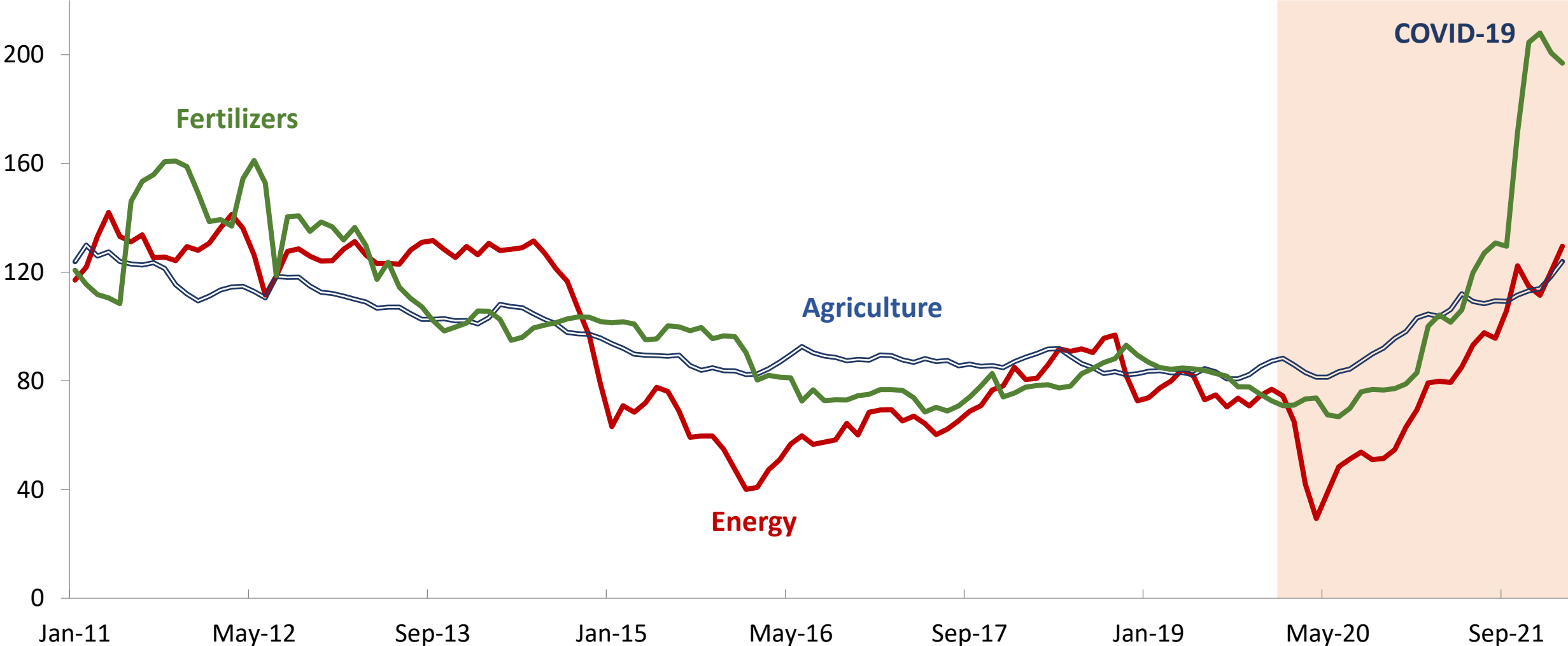
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March 9, 2022



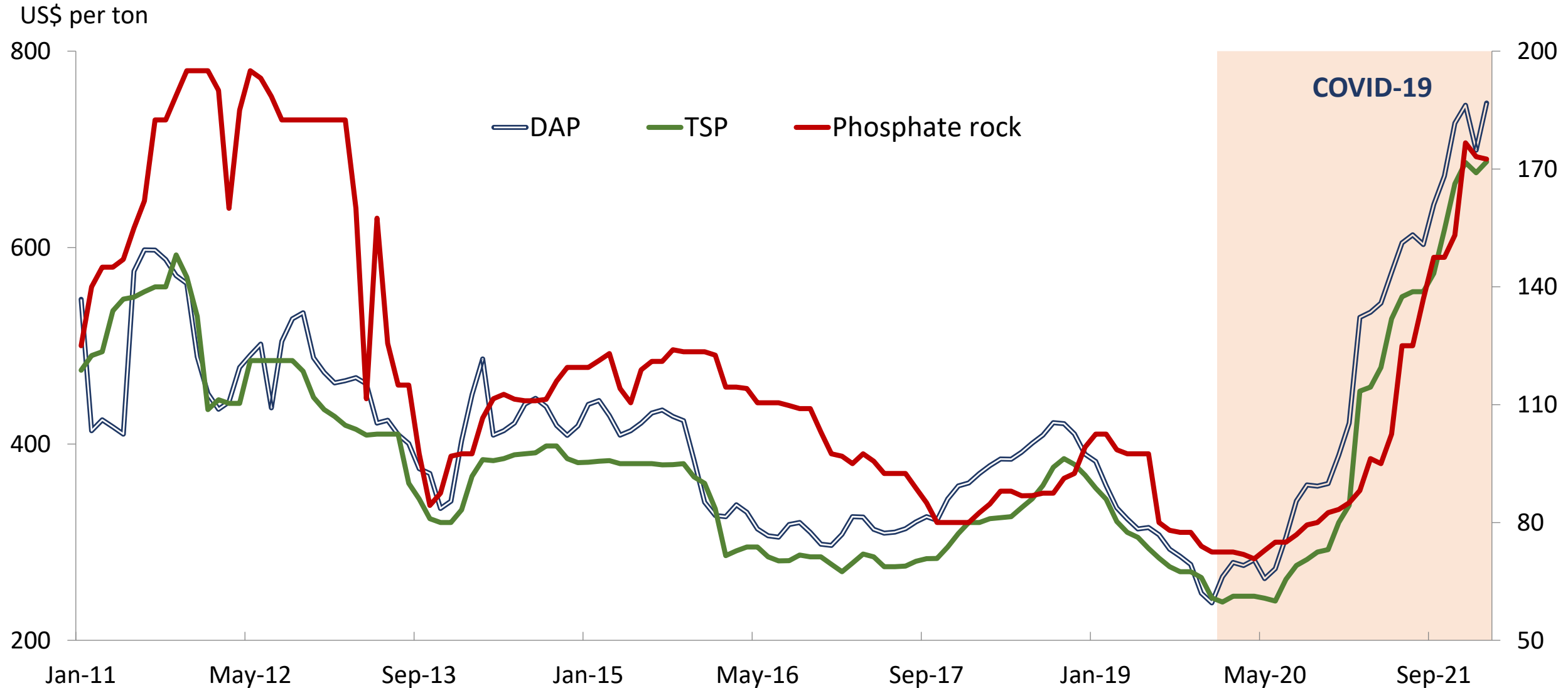
Commodity prices: 2011-22

US\$ index, nominal terms, 2010 = 100



Source: World Bank.
Note: The shaded area corresponds to February 2020 – February 2022 (last observation).

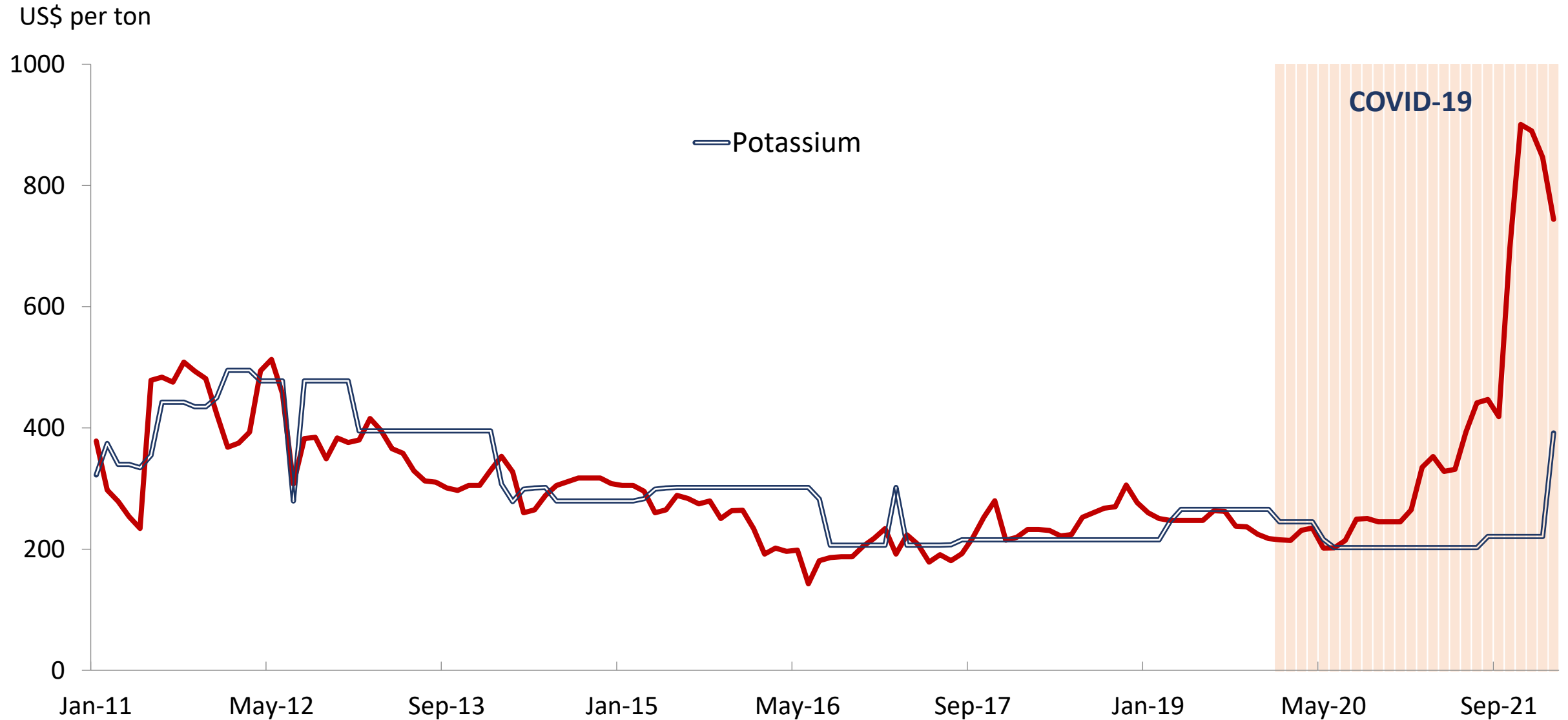
Fertilizer prices: 2011-22



Source: World Bank.

Note: The shaded area corresponds to February 2020 – February 2022 (last observation).

Fertilizer prices: 2011-22



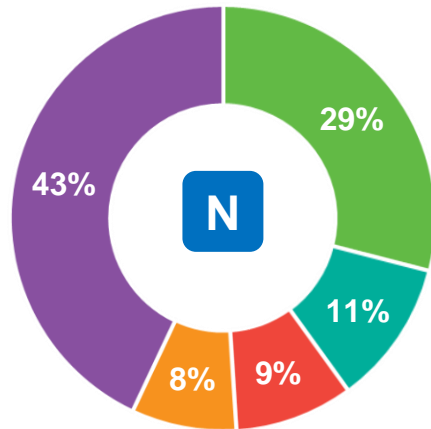
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Supply chain characteristics make the fertilizer sector vulnerable to disruptions

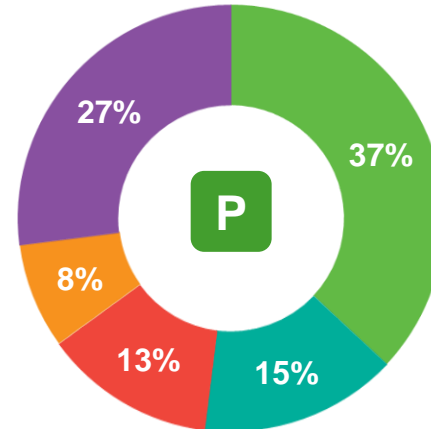
AMMONIA

■ China ■ Russia ■ U.S.A. ■ India ■ Other



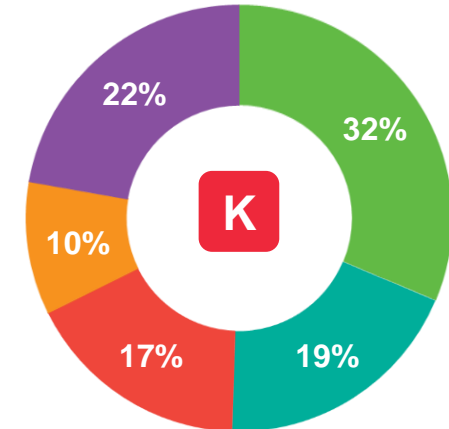
PHOSPHORIC ACID

■ China ■ Morocco ■ U.S.A. ■ Russia ■ Other



MOP (POTASH)

■ Canada ■ Russia ■ Belarus ■ China ■ Other



Source: IFASTAT | Exported 07 MAR 2022

Supply chain characteristics make the fertilizer sector vulnerable to disruptions

N

Urea

29%

P

MAP+DAP

48%

K

Potash

82%

Source: IFA, 2021



Drivers of Fertilizer Supply

Production and transportation costs & disruptions

- N: Energy feedstocks = 70-80% of Ammonia Production Costs
- N: Chinese ammonia production still largely based on coal
- P: Ammonia and Sulphur prices impact phosphate production costs
- Ammonia Production Cuts in Europe and China
- Hurricanes in US Gulf region temporary outages

Trade Measures

- US Trade remedies vs. **Morocco** and **Russia** P (February)
- **China**: export freeze imposed (October)
- **Turkey**: Export restrictions imposed on N,P,K (October)
- **Russia**: 6 months export quota imposed for N and P (November)
- **Egypt**: N exports halted unless cleared by MoA (November)
- US sanctions on **Belarus** K (December); EU sanctions (2 March, 2022)



Drivers of Fertilizer Demand

- Higher crop prices & favorable fertilizer/crop price ratios
- weather in producing regions
- Fertilizer subsidies

Global Mineral Fertilizer Demand (Mt nutrients)

	N	P2O5	K2O	Total
2018/19	105.6	45.5	37.1	188.2 (-.9%)
2019/20	108.2	46.5	37.0	191.8 (+1.9%)
2020/21 (f)	113.7	49.7	40.4	203.8
Change	+5%	+6/8%	+9.1%	+6.3%

Source: IFA Short-Term Market Outlook, November 2021



What Lies Ahead in 2022 and Beyond?

- Weather/Harvests?
- Energy prices?
- Agricultural Commodity Prices?
- Fertilizer Production Increases?
- Sanctions/export restrictions?
- Government Subsidies?
- Potential Demand Destruction?
- Implications for Soil health?
- Implications for fertilizer use efficiency?
- Green Fertilizers?

