



Fertilizer Outlook 2020 – 2024

Market Intelligence and Agriculture Services

IFA Secretariat



This is a Public Summary for a comprehensive report entitled “Global Medium-Term Outlook for Fertilizers and Raw Materials: 2020-2024”, which is available to IFA members only.

The Market Intelligence Service:

- ✓ Marina Simonova, Senior Director
- ✓ Armelle Gruère, Program Manager – Demand
- ✓ José de Sousa, Program Manager – Supply
- ✓ Virginie Couturier, Senior Market Analyst – Phosphates
- ✓ Olivier Rousseau, Senior Market Analyst – Potash & NPK
- ✓ Sylvie Marcel-Monnier, Project Coordinator

The Agriculture Service:

- ✓ Samy Beltaief, Policy Analyst

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ECONOMIC, POLICY AND AGRICULTURAL CONTEXT

Severe economic impact of COVID-19

In April 2020, the International Monetary Fund (IMF) forecasted a 3% contraction in global economic activity for 2020, worse than the downturn experienced in 2009.

Numerous economic policy efforts throughout the world have focused on safeguarding measures to ensure business continuity and a smooth restart of economic activity post-pandemic. The political response has been substantial but uneven.

Wide-spread national lockdowns and multiple disruptions of international supply chains and travel in H1 2020 have triggered overwhelming uncertainty in global business and economic activity, and volatility in foreign exchange rates and commodity prices.

Crude oil prices fell by 70% between late January and April 2020. According to the World Trade Organization (WTO), global merchandise trade could drop significantly in 2020. Currencies have reached levels of volatility unseen in recent years.

Agriculture and fertilizers: resilient but not immune

Agricultural supply chains have been negatively affected by COVID-19. Although the persistence of these disturbances in the long-term is unlikely, some governments have set up plans to support food supply chains and farmers.

As an example, to ensure the safe and orderly production, supply, and retail of fertilizers, by April 2020, over 20 countries in lockdown had officially declared fertilizers and workers involved in the fertilizer supply chain as essential.

As for farmers, countries like the U.S.A. and China have set up aid packages to farmers and agribusinesses, and France, Italy, the United Kingdom, and Australia have taken supportive measures to tackle labour shortages.

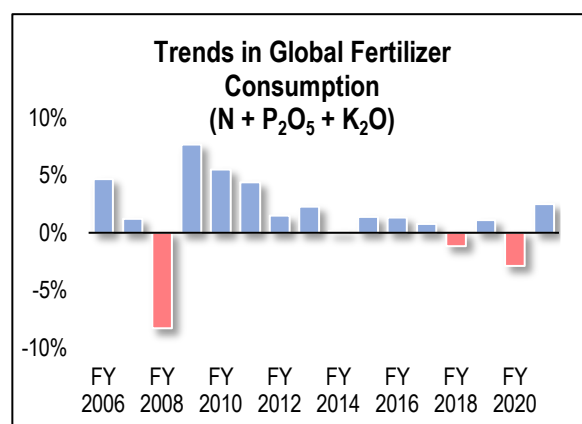
FERTILIZER DEMAND

The global health crisis caused by the COVID-19 pandemic is expected to affect fertilizer consumption in two ways: through its primary impact on labour and logistics, and through its secondary impact on demand for agricultural commodities.

Overall, as of mid-April 2020, the impact of COVID-19 on 2020 fertilizer deliveries had been limited in North America and in Europe, where farmers had already procured their fertilizers for the main growing season; some delays in the supply of fertilizers were deemed possible for later occurring top-dressing applications. Potential delays in input deliveries were expected in countries with a later start of the growing season, if farmers had not yet procured and received their fertilizers.

Short-term fertilizer demand forecasts

Our short-term expectations suggest fertilizer use will decline in several regions in Fertilizer Year (FY) 2020, and then rebound in FY 2021. The regions that are expected to experience the strongest decline are East Asia, South Asia and West Asia. Fertilizer use is expected to decline more moderately in FY 2020 in North America, Latin America and Europe. Fertilizer use is tentatively placed stable in Africa. Some regional markets are expected to expand their fertilizer consumption despite the COVID-19 crisis: EECA and Oceania.



Global fertilizer demand is expected to decline by 2.9% (-5.5 Mt) between FY 2019 (189.9 Mt) and FY 2020 (184.4 Mt), before recovering partially in FY 2021, by 2.5% to 189.0 Mt. In relative terms, the expected decline in FY 2020 would be more significant for K₂O (-4.5%) and P₂O₅ (-3.5%) than for N (-2.1%). These different expectations by nutrient reflect the generally greater import dependence of consuming countries for K₂O and P₂O₅ than for N, the fact that the crisis has affected more severely fruits and vegetables, sugar and palm oil, and also the fact that demand for K₂O and P₂O₅ tends to be more affected than demand for N during economic crises.

In absolute terms, the decline in global fertilizer use in FY 2020 would be driven by N (-2.2 Mt), and to a lesser degree by P₂O₅ and K₂O (-1.6 Mt each). The rebound in FY 2021 would also be driven by N (+2.4 Mt), whereas P₂O₅ and K₂O would recover only partially (+1.2 Mt for P₂O₅ and +1.0 Mt for K₂O).

The 3% decline expected in global fertilizer use in FY 2020 is much smaller than the 8% drop that took place in FY 2008 during the last financial crisis. The logistics and labour issues caused by the current health crisis are not expected to affect all countries to the same extent. And while the global economic downturn in 2020 is expected to be deeper versus 2008/09, there has been significantly less volatility in crop and fertilizer prices in the period preceding the health crisis than in the period preceding the 2008/09 crisis.

Medium-Term Fertilizer Demand Forecasts

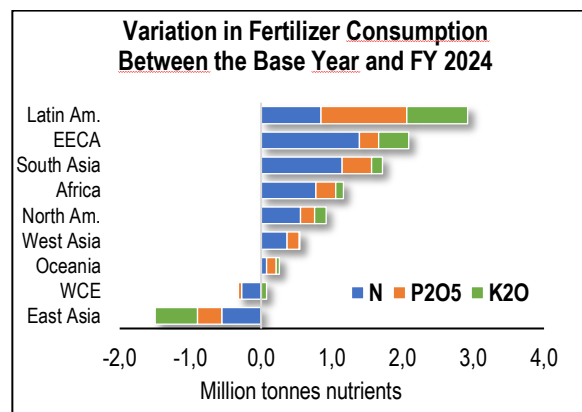
Between the base year (three-year average of FY 2017, FY 2018 and FY 2019) and the end of the outlook forecast in FY 2024, global fertilizer demand is expected to grow by an annual average rate of 0.7%, to reach 197.1 Mt nutrients. Consumption of N is expected to recover faster than that of P₂O₅ and K₂O. However, over the forecast period, P₂O₅ consumption would grow at a slightly higher average annual rate (+0.8%) than N (+0.7%) and K₂O (+0.6%), due to the weight of Latin America as a key regional contributor to the global consumption growth.

Over the outlook period, Latin America is expected to drive global fertilizer demand, accounting for 37% of the total increase.

It would be followed by EECA (27%), South Asia (22%), Africa (15%) and North America (12%). East Asia is expected to slow this increase, with an anticipated decline in total fertilizer demand (principally China).

West Asia and Oceania are expected to make small contributions to the global increase in fertilizer demand, whereas Europe is expected to demonstrate a negative growth over a period, albeit not as pessimistic as in East Asia.

In relative terms, EECA is the region where fertilizer demand is expected to grow the fastest, followed by Africa, Latin America, West Asia, Oceania, South Asia and North America. Fertilizer use is expected to decline in WCE (West and Central Europe) and East Asia.



In addition to the major risk factors related to COVID-19, there are other uncertainties that could affect fertilizer use, including economic growth, speed of economic recovery, geopolitics, trade relationships, animal and plant health, weather, and government actions.

May 2020 Update

In May 2020, after the preparation of these forecasts, there was increasing evidence that the short-term disruptions to logistics of fertilizer deliveries would be smaller than initially feared. However, the global economic downturn was expected to be more severe than the first projection developed by the IMF in April 2020. Hence it is possible that global fertilizer demand does not decline as much as expected in FY 2020 but takes longer to recover.

FERTILIZER SUPPLY

World fertilizer market conditions in 2019 were marked by mixed performance in crops and energy prices, particularly characterized by a downward trend in natural gas prices in Europe. International fertilizer trade flows continued to be affected by tensions and barriers, with new developments for UAN and NPKs. Several new projects have been commissioned in 2019 increasing fertilizer affordability and trade flows well into 2020.

Global nutrient demand is expected to decline in 2020, while capacity expansion continues

World primary nutrient sales in 2019 increased by a modest 0.8% compared with the previous year, reaching 251 Mt *nutrients*. The negative consequences of COVID-19 and widespread disruptions across the global fertilizer supply chain, including operational performance, transportation and infrastructure coupled with macroeconomic turbulence, are expected to result in a downward trend in 2020 with an expected reduction of total sales of primary nutrients to 247 Mt. Global fertilizer sales (accounting for 75% of total sales) reduced slightly from 189 Mt in 2018 to 188 Mt *nutrients* in 2019. A further decline to 186 Mt *nutrients* is expected in 2020. Industrial uses and non-allocated tonnages totaled 63 Mt *nutrients* in 2019, however, a contraction to 61 Mt is expected in 2020.

Following two years of consecutive growth global exports of primary nutrients have decreased in 2019 (-7% to 55 Mt *nutrients*), but domestic deliveries improved modestly to 195 Mt *nutrients* and accounted for a 78% share of total sales.

Increasing regulatory pressure

In many jurisdictions, at regional, national and sub-national levels, the fertilizer industry is subject to new supply-related regulations. Policymakers are adopting new regulations on fertilizers, product and plant certifications, and tailings management due to environmental and safety considerations.

More fertilizer producers are seeking registration in high-standard certification programs. Phosphogypsum management regulatory requirements in China and Green Deal in the EU, as well as implementation of emissions trading and carbon schemes across the world are expected to have wider implications for the evolution of the fertilizer industry going forward.

Trade sanctions impact fertilizer flows

In recent years the pace of trade liberalization has slowed while restrictive trade measures have increased.

Trade policy actions in 2019/2020 impacted movements of commodities, including fertilizers. They comprised a variety of initiatives such as trade defense measures, import bans, lifting of export tariffs and administrative import barriers. The industry sectors affected by trade barriers include UAN, AN, NPKs and other country specific sanctions, e.g. against Iran, which is a major supplier of nitrogen products to the international market. In the middle of 2020, a new countervailing duty investigation was initiated on imports of phosphate fertilizers into the U.S.A.

Global nutrient demand growth slowing down to 0.9% per annum towards 2024

In 2024, global primary nutrient sales of primary products (for both agricultural fertilizer and industrial uses) are projected at 263 Mt *nutrients*, for an average annual growth rate of 0.9%. This represents a downward revision of our projections from last year. The latest forecast takes into account expected disruption in 2020 due to a negative impact of COVID-19 on the global fertilizer supply chain, global recession, economic slowdown and uncertainty of the speed of the economic recovery, record unemployment rates and ample grains stocks globally. Nutrient fertilizer demand in 2024 would reach 197 Mt *nutrients*, growing at 0.9% p.a. and represent 75% of total sales.

Global supply ample to meet increasing nutrient demand in 2020-2024

Due to ongoing capacity additions which are expected to be commissioned during the next five years, global supply will be more than sufficient to meet global demand.

Based on a modest 0.9% average annual growth in global demand for all uses, compared with an average of 1.9% annual growth in supply, markets will remain generally supply-driven.

Nitrogen Outlook

Global ammonia capacity increasing, mostly driven by urea expansions

Global ammonia capacity is projected to expand by 6% (a net 14.1 Mt NH₃), from 218 Mt in 2019 to 232 Mt NH₃ in 2024. On a regional basis, ammonia capacity is seen as expanding rapidly in South Asia (driven by India), Africa (mainly Nigeria and Egypt) and EECA (Russia, Belarus and Uzbekistan). Following a period of large-scale capacity restructuring from 60 Mt N in 2014 to 53 Mt N in 2019, ammonia capacity in China is expected to remain flat at the level of 53 Mt N during 2020-2024. Some reduction of ammonia capacity is expected in Latin America between 2019 and 2024.

Nitrogen supply/demand imbalance to increase in the near term

Between 2019 and 2024 global nitrogen supply would expand by an average of 1.6% p.a., compared with a 1.0% annual increase in demand, essentially supported by higher industrial demand growth at 1.8% p.a. during the outlook period. There is a growing trend of product diversification with an interest in N+S, SNF, and CRF products.

The prevalent potential surplus of 9.3 Mt N in 2019 would increase considerably to 15.0 Mt N by 2021 and reduce marginally thereafter to 14.3 Mt N by 2024.

Nitrogen demand growth leading to higher imports into North America and Sub-Saharan Africa

Nitrogen demand would grow in most regions, except West Europe, where industrial demand growth is expected to be lower because of COVID-19 impact and agricultural demand is projected to have a downward trend.

The largest growth in demand between 2019 and 2024 is projected in East Asia (driven by the recovery of industrial applications post pandemic), EECA, South Asia and North America, together accounting for up to 68% of all growth between 2019 and 2024. Rising demand in Sub-Saharan Africa will create import opportunities in the near term.

Urea capacity to increase significantly by 2021, with a moderate growth afterwards

Urea capacity expansions would contribute 75% of the projected ammonia capacity increment over the period of 2020-2024.

Following two consecutive years of decline global urea capacity amounted to 209 Mt in 2019. The expected commissioning of multiple projects in the pipeline in the short-term would result in an increase of global urea capacity to 225 Mt by 2021, i.e. a growth of 17 Mt (+8%). Thereafter, urea capacity growth would slow-down, increasing to 230 Mt by 2024. Between 2019 and 2024 large capacity additions are planned to come on stream in South Asia (driven by India and to a lesser extent Bangladesh), Africa (represented by Nigeria and Egypt) and EECA (Russia and Uzbekistan).

The imbalance between urea supply and demand is expected to increase in the medium term

Global urea supply (effective capacity) is estimated to reach 203 Mt in 2024, growing by a net 2.2% p.a. compared with 2019, while demand would increase by 0.9% p.a. to 183 Mt in 2024.

Urea demand is projected to increase in virtually every region, to a lesser degree in East Asia. South Asia will account for nearly 25% of the global potential demand growth. Significant increase in urea demand is anticipated in Latin America and Africa. Due to the combination of rising potential demand and announced capacity closures, the largest deficit will occur in Latin America.

Phosphate Outlook

Phosphate rock supply continues to increase, driven by expansion in Africa

The global phosphate rock supply is projected to grow from 239 Mt in 2019 to 261 Mt in 2024, an increase of 9% over the period, i.e. equivalent to 1.8% p.a. Africa would account for 72% of the net increase during the outlook period.

Processed phosphates capacity continues to evolve towards more product flexibility and diversification

Global phosphoric acid capacity is expected to increase by 11% (i.e. +6.6 Mt P_2O_5) compared with 2019, to 64.4 Mt P_2O_5 in 2024.

Global processed phosphates capacity is projected to increase by 14%, from 98 Mt in 2019 to 112 Mt products by 2024. Africa will be the largest contributor to capacity growth during the outlook period. Expansion is also seen in EECA, West Asia and South Asia.

Supply and demand are expected to grow moderately in the near term

The global supply of phosphoric acid would increase by 1.6% p.a. between 2019 and 2024, while demand would grow at a slower rate of 1.1% p.a. The potential surplus would decrease marginally in 2020, increasing thereafter until 2024.

Potash Outlook

Ongoing capacity growth, with an additional 9.5 Mt K_2O expected to be brought on stream between 2019 and 2024

Global potassium capacity is forecast to increase by an overall 16%, from 59.8 Mt K_2O in 2019 to 69.4 Mt K_2O in 2024, provided that macroeconomic uncertainty and expected global recession caused by COVID-19 pandemic would not hamper the progress of the planned capacity expansions which are scheduled for start-up in the medium-term.

This equates to a net increment of nearly 10 Mt K_2O , most of which is represented by new projects expected to be commissioned in the EECA region (Russia and Belarus), as well as minor net capacity additions in North America, West Asia, Africa and Oceania, the latter two represented by SOP project developments. In product terms, global primary potassium capacity in 2024 would reach 117.2 Mt products, expanding by a net 15.9 Mt.

EECA and North America will account for 93% of potash supply growth in 2019-2024

In terms of MOP equivalent, global potash supply would reach 93.2 Mt in 2024. The EECA and North America would account for around 40% and 32% of potential supply, respectively, in 2024.

New large-scale capacity additions, coupled with a modest potash demand growth, will lead to a growing potential surplus

Global demand for potassium for all uses (agricultural and industrial applications) would grow at 1.0% p.a., from 42.0 Mt K_2O in 2019 to 44.2 Mt K_2O in 2024. This represents a downward revision of demand projections compared to last year forecast. Potential global potash supply/demand conditions indicate a considerable widening of the estimated annual surplus between 2019 and 2024, reaching 11.8 Mt K_2O by the end of the outlook period, provided all capacity expansions in the baseline scenario materialize on schedule.

Increasing regional deficits would support a 20% growth in potash trade by 2024

Up to 80% of globally produced MOP is traded internationally. The reason for expected high increase in global potash trade in the order of nearly 20% during the outlook period is partly driven by a lower base year in 2019, when international potash trade contracted significantly y-on-y compared with 2018 due to weak market conditions. The growth will be supported by increased export orientated capacity scheduled to be commissioned in the next five years.

The medium-term projected supply/demand imbalances in Latin America and East Asia regions are pointing towards growing import dependence, albeit at a slower rate for East Asia, where fertilizer demand growth is expected to slow down driven by new policies in China.

Some key consumers across Southeast Asia suggest an import growth potential, including India, Indonesia and Malaysia, and Africa.



ifa
INTERNATIONAL
FERTILIZER ASSOCIATION

CONTACT

INTERNATIONAL
FERTILIZER ASSOCIATION



49 avenue d'Iéna,
75116 Paris, France



info@fertilizer.org
www.fertilizer.org



T: +33 1 53 93 05 00
F: +33 1 53 93 05 45



international-fertilizer-association-ifa



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