KEY TRENDS IN THE GLOBAL FERTILIZER MARKET

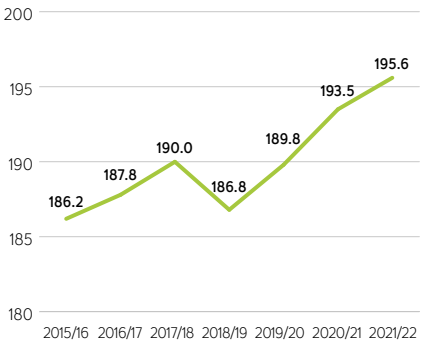
AGRICULTURAL MARKETS

Agricultural products, food and allied industrial goods, including fertilizers, are classified as strategic supplies, with COVID-19 having a limited impact on them. These goods benefitted from preferential supply terms during the lockdown. As a result, we saw an increase in trade volumes for both core agricultural products and fertilizers. Farmers from many advanced and developing economies received additional government subsidies designed to boost the resilience of supply chains in the agricultural sector. This had a positive effect on the global mineral fertilizer market.

HIGH LEVEL NUTRIENT DEMAND REVIEW

The International Fertilizer Association (IFA) expects[1] global fertilizer use to rebound by 1.6% to 189.8 mln t nutrient in 2019/20, following an estimated decline of 1.7% to 186.8 mln t nutrient in 2018/19.

Global fertilizer use, mln t nutrient



The rise in global fertilizer use in 2019/20 was led by India, where the monsoon brought abundant rainfall, and improved consumption in the US. In South Asia and North America consumption grew by ca. 6.0%, or 2.0 and 1.4 mln t nutrient respectively. Eastern Europe and Central Asia (FSU countries) registered a more than 10% (0.9 mln t nutrient) growth in 2019/20, mostly driven by higher consumption in Russia. Latin America and the Middle East saw an increase of 0.5 mln t nutrient, or 2% and 10% respectively. Fertilizer use remained almost stable in West and Central Europe (WCE) and Oceania

and was estimated to be down in Africa by some 0.2 mln t nutrient, or 2.4%. Lower consumption was also recorded in East Asia (down by 2.3 mln t nutrient, or 3.5%) primarily due to reduced demand in China, Indonesia and Malaysia caused by unfavourable weather conditions (drought) coupled with adverse trends in the palm oil market.

In 2020/21, IFA anticipates a 2% increase in global fertilizer use to 193.5 mln t nutrient despite the COVID-19 pandemic. Phosphorus (P2O5) consumption is expected to increase by 3%, compared with 1.6% for nitrogen (N) and 1.4% for potassium (K2O).

Several factors are contributing to greater fertilizer demand, including government measures to support agricultural producers and the mineral fertilizer industry, resilient crop prices, weakening of domestic currencies in large agricultural exporting countries, and favourable weather in key consuming countries.

Despite the overall growth in global fertilizer use, some countries are still experiencing difficulties due to logistics and other limitations related to the pandemic.

The World Bank, International Grains Council (IGC) and other industry organisations expect global production of grains and oilseeds to grow, with drivers including increases in cultivated land and crop yields across the key regions (in Brazil and the USA following a recovery from the 2019 challenges). Global output of rice rose slightly on expanded acreage in Asia, while wheat output remained stable.

South Asia (with an anticipated growth of 5.6 mln t nutrient) is expected to be the main positive driver of global fertilizer use in 2020/21, followed by North America and Latin America (0.5 and 0.7 mln t nutrient respectively) and Europe (0.5 mln t nutrient). Four regions could gain around 100,000 tonnes of nutrients each: EECA, Africa, Oceania and WCE.

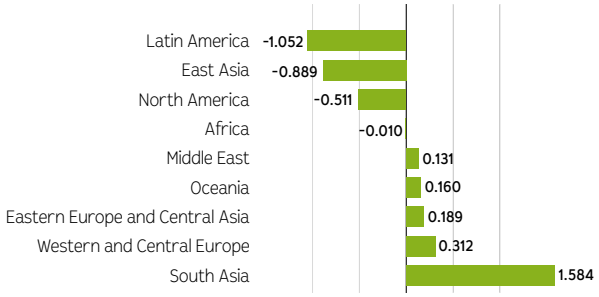
India will be the main contributor to global demand growth in 2020/21, including as a result of a favourable monsoon season in the second half of 2020. In Latin America, Brazil will be the main growth driver given an expected soy and corn acreage expansion. Further recovery in fertilizer use is anticipated in the USA and Canada, also as a result of expanded acreage. Russia is also expected to deliver stable growth in fertilizer use attributable to favourable conditions in the grains market.

[1] Executive Summary Short-Term Fertilizer Outlook 2020–2021 Market Intelligence and Agriculture Services International Fertilizer Association (IFA), November 2020.

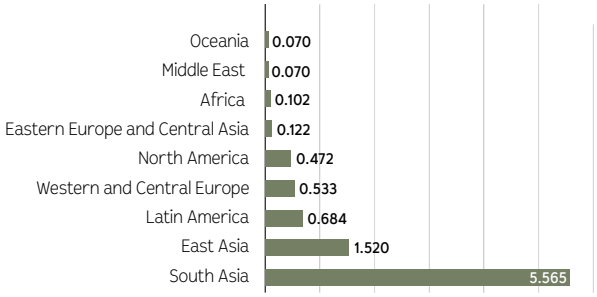
Global fertilizer demand, mln t nutrient

Nutrient	2019/20	2020/21	2019/2020, %	2020/2021, %
Nitrogen (N)	106.7	108.4	2.8	1.6
Phosphate (P_2O_5)	47.1	48.6	2.6	3.2
Potassium (K_2O)	36.1	36.6	(2.7)	1.4
Total	**189.9**	**193.6**	**1.7**	**1.9**

Fertilizer consumption trends by region in 2019–2021, mln t nutrient



Anticipated changes in fertilizer consumption by region in 2020–2021, mln t nutrient



HIGH LEVEL NUTRIENT SUPPLY REVIEW

World fertilizer supply in 2020 remained relatively resilient globally. Despite uncertainties and new challenges related to the COVID-19 pandemic, global supply of ammonia, urea, MAP and potassium fertilizers was on a steady growth path, while both DAP and TSP production declined slightly.

Temporary shutdowns or closures of plants in the nitrogen and potassium market segments were balanced by the start-up of new facilities / ramp-ups. As for phosphate products, capacities remained almost unchanged compared with 2019. The key factors affecting the supply of fertilizers in 2020 included natural gas price volatility, notably in Europe, higher inflation, FX rate fluctuations, and new trade defence measures. In June 2020, US-based Mosaic filed petitions with the country's Department of Commerce and International Trade Commission for countervailing duty investigations to determine whether producers of phosphate fertilizers in Morocco and Russia were receiving subsidies. In November 2020, the US Department of Commerce issued preliminary determinations on phosphate fertilizer imports, with rates ranging from 17% to 75% depending on the producer from Morocco or Russia. The investigations are expected to end with a final decision on the rates in Q2 2021.

According to IFA[1], despite the uncertainties associated with the COVID-19 pandemic, the output of raw materials demonstrated moderate growth. Estimates show that global output of ammonia, phosphate rock and primary potash was up by 1% each.

In 2020, global supply of the key nutrients – nitrogen, phosphate and potassium – was estimated at 253 mln t nutrient, up 0.7% year-on-year. Fertilizer demand (79% of total demand) was estimated at 191.4 mln t nutrient, up 2.2% year-on-year. Net industrial uses, non-allocated tonnages and distribution losses totalled 51.7 mln t nutrient.

Production capacities showed mixed performance in the key segments, remaining almost flat in phosphoric acid and increasing in ammonia and potassium. Overall global net capacity growth in the three segments was 5.4 mln t nutrients.

[1] Executive Summary Short-Term Fertilizer Outlook 2020–2021 Market Intelligence and Agriculture Services International Fertilizer Association (IFA), November 2020.

PHOSPHATE ROCK AND PHOSPHATE-BASED FERTILIZER MARKET

Phosphate rock

According to IFA's preliminary estimates, global production of phosphate rock in 2020 rose slightly, by 1% year-on-year, to 207.7 mln t following two years of contraction.

Exports of phosphate rock remained steady at around 30 mln t, with Morocco remaining the world's largest exporter (one-third of total exports). Jordan and other North African countries accounted for 18% and 14% of global exports respectively. The largest importers of phosphate rock were India (25%), Europe (23%) and Latin America (15%). Phosphate rock prices were growing gradually throughout 2020 amid favourable trends in phosphate-based fertilizer markets.

Phosphate-based fertilizers

According to preliminary estimates, global production of the main types of phosphate-based fertilizers (DAP/MAP) grew by 3% in 2020 to 64 mln t in real terms. MAP output increased by ca. 5% driven by higher production in Russia, Brazil, Morocco and the US, while DAP output grew by 2%, in particular as a result of reduced production in China and India caused by COVID-19 related restrictions.

Global trade in DAP/MAP in 2020 was 31.3 mln t vs 30.1 mln t in 2019. Imports of DAP/MAP to Latin America and South Asia (India) grew strongly, whereas supplies to the US shrank due to, among other things, the investigation opened to determine whether producers from Morocco and Russia, the key suppliers of phosphate-based fertilizers globally, were receiving subsidies. Exports of DAP from China declined in 2020 on the back of lower production/exports amid COVID-19 restrictions.

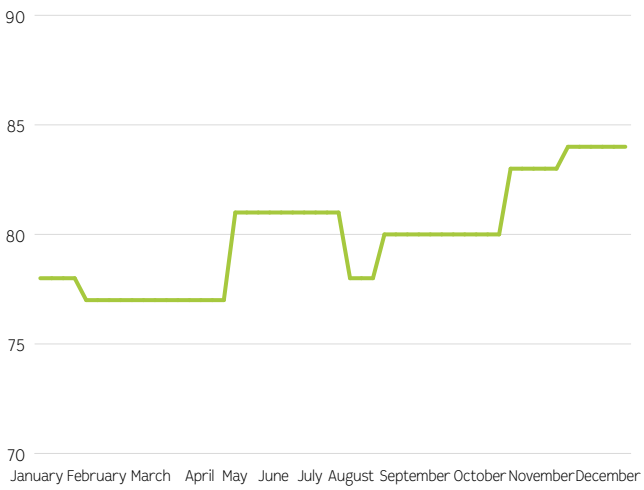
Global prices for the main types of phosphate-based fertilizers were mostly growing in 2020 supported by favourable conditions in the core agricultural product markets and high affordability of fertilizers as a result. Besides, the key markets enjoyed favourable weather conditions, which also contributed to higher seasonal demand in India, Brazil and the US. As DAP/MAP exports from China and the US reduced in favour of domestic supplies, this served as an additional driver of higher global prices.

AMMONIA AND UREA MARKET

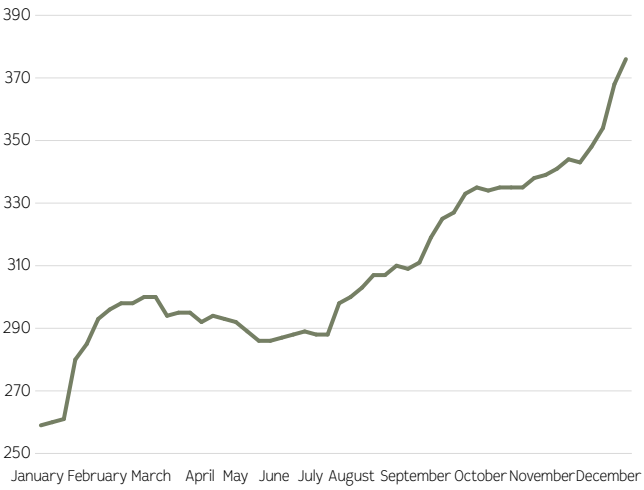
Ammonia

According to preliminary estimates, global ammonia production in 2020 expanded by 1.1% to 179.4 mln t, with Russia, the USA and Saudi Arabia among the main growth contributors. At the same time, ammonia production contracted in Latin America (with amplified idle capacity in Brazil, disruptions in natural gas supplies in Venezuela, and one of the plants shut down in Trinidad) and South Asia (due to disruptions in commodity supplies and fallout from COVID-19 in Bangladesh and India). Despite the closure of production capacities in Kuwait and trade sanctions imposed on Iranian products still

Phosphate rock prices, USD/t, FOB Morocco (32% P_2O_5)



DAP/MAP prices, USD/t, FOB Baltic



in force, ammonia production in the Middle East increased by 1% driven by growth in Saudi Arabia.

Global ammonia trade volumes in 2020 are estimated at 19.7 mln t, up 0.4% year-on-year. Russian exports account for 24% of world trade. The share of Trinidad and Tobago in global ammonia exports stands at 23%. There is also a notable rise in exports from Eastern Europe, Central Asia and North America. In 2020, contraction of ammonia imports was recorded in India, Mexico and Ukraine, whereas China, Morocco and the USA increased their imports. Pricing in the global ammonia market was influenced by low natural gas prices and decreased import activity in Q2–Q3 2020, including due to the impact from COVID-19. In late 2020, global ammonia prices began to recover on the back of stronger seasonal demand in the key merchant ammonia export markets.

Urea

Global urea production in 2020 increased by 2.8% to 181.7 mln t driven by growing volumes in Asia, Africa and North America. China still ranks as the largest urea manufacturer in the world, with production in 2020 rising by 2.9% to 56.8 mln t. The only recorded contraction was in Latin America due to the suspension of production and disruptions in commodity supplies in Brazil, Bolivia and Venezuela.

Global urea trade volumes in 2020 are estimated at 52.2 mln t, up 3.4% year-on-year. This is due to a considerable increase in demand for imports in Brazil and other Latin American countries and continued demand from India, the world's largest urea importer. 2020 saw the resumption of urea exports from Ukraine driven by relatively low prices for natural gas and higher production volumes.

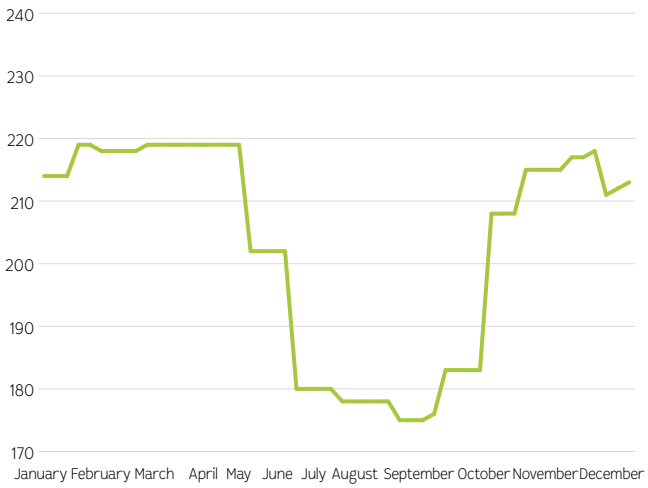
Global urea prices are traditionally highly volatile due to seasonal changes in the balance between demand and supply in the global market. The reduction of prices from April to June comes about as seasonal demand in the key sales markets (North America, Europe, China and Russia draws to an end, with recovery following on the back of higher import demand from India and Brazil, the leading urea consumers.

POTASH FERTILIZER MARKET

According to the preliminary IFA estimates, global production of potash feedstock in 2020 recovered by 0.8% to 42.1 mln t of K20, including as a result of higher demand from the key markets of North and South America and India. New capacity launches in 2020 had a limited impact due to the gradual ramp-up of new capacities.

Global trade volumes for potassium chloride, the key type of potash-based fertilizers, reached approximately 51.4 mln t in 2020, up 5.8% year-on-year. With favourable weather conditions and continued growth in the agricultural markets, the USA, Brazil and India increased their imports, whereas the key consumption markets in Asia (China, South East Asia) cut back on import demand, producing a negative on global prices, especially in the first half of 2020.

Evolution of merchant ammonia prices, USD per tonne, FOB, Baltic



Evolution of urea prices, USD per tonne, FOB, Baltic