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Fertilizer Outlook 2018 – 2022

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ECONOMIC AND POLICY CONTEXT

Global growth has recovered

According to the International Monetary Fund (IMF), global growth is expected to reach 3.9% in both 2018 and 2019, fueled by more rapid growth than expected in the euro area, China, Japan and the United States (US). The US is forecast to lead the developed countries group with average growth of 2.9% in 2018. Growth in the developed economies is projected to reach 2.5%, but to hover below 2% between 2020 and 2022. The emerging and developing economies are forecast to grow by 4.9% throughout the year and slightly over 5% from 2020 to 2022.

Financial uncertainty, trade tensions and political developments cloud the horizon

In 2018, when quantitative easing ends, interest rates could spike throughout the world, tightening credit conditions.

The escalation of trade friction, as illustrated by recent failures of the G20 and G7 to revitalize globalization, could impact global economic coordination. The implications of ongoing tensions for the global economy remain a key uncertainty.

Policy decisions continue to affect the economic outlook

Important policy developments recently occurred in some large fertilizer-consuming markets. In China, the quantitative targets of the Zero-Growth Action Plan on Chemical Fertilizers have been reached, as shown by currently plateauing demand. It is anticipated that demand will begin to contract in a five-year perspective. In South Asia and Sub-Saharan Africa, many fertilizer markets remain dependent on government support. India's government has carried out its yearly revision of the country's fertilizer subsidy regime.

To reduce urea consumption and promote more balanced fertilizer use, the government has mandated reducing the size of urea bags from 50 kg to 45 kg. The EU is still discussing its proposed new Fertilizer Regulation.

WORLD AGRICULTURE

Global cereal stocks will contract moderately

Global cereal production is expected to remain stable in 2018/19. A small decline in wheat production, the first in six seasons, could be offset by slight increases in coarse grain and rice output. Global cereal use could continue rising slowly; food, feed and industrial uses are all expected to grow. Global cereal stocks could therefore decline for the second consecutive season. Most of this contraction in stocks would be driven by coarse grains, mainly in the US and China. Wheat and rice stocks are expected to decline only slightly. Cereal prices have been strengthening slightly since early 2018, reflecting tighter supplies. They could continue to receive moderate support from declining stocks in 2018/19. Soybean production is expected to rebound in 2018/19 owing to further expansion of plantings (particularly in Latin America) and a return to average yields. Consumption should continue rising at a firm rate. Global soybean stocks could remain stable.

Agricultural production will grow more slowly in the medium term, driven by improved yields

According to the Organisation for Economic Co-operation and Development (OECD) and the Food and Agriculture Organization of the United Nations (FAO), global food demand is expected to grow more slowly in the coming decade than in the previous one. Demand will be driven by population growth; consumption per capita will not increase much, and that increase will be concentrated in the least developed countries. One exception is dairy products, per capita consumption of which is projected to rise firmly.

Demand for feed will continue to exceed demand for livestock products, as livestock production keeps intensifying. However, the demand for feed will increase more slowly than in the past decade. Similar to food demand, crop production will grow more slowly in the medium term. Its expansion will be based mostly on yield improvements rather than area expansion. An exception is soybeans, for which increases in both area (in Latin America) and yield are expected to drive production. The OECD and FAO project moderate growth in the nominal prices of major crops during the next decade.

FERTILIZER DEMAND

World fertilizer demand is anticipated to grow modestly in 2017/18 and 2018/19

In 2017/18, global fertilizer consumption grew moderately (+0.9%) to reach an estimated 187 million tonnes (Mt) of nutrients. This modest growth reflects a combination of relatively low but slightly increasing international prices for most agricultural commodities; an increasing emphasis on more efficient use of mineral fertilizers; and greater recycling of organic nutrient sources. Demand for P and K grew firmly while demand for N rose marginally.

Global fertilizer demand is expected to continue growing moderately in 2018/19 due to prospects for persisting low-to-medium international crop prices. Moreover, China will have reached a tipping point for domestic N and P fertilizer consumption. Demand is anticipated to grow by 0.8% to 189 Mt, assuming no major unexpected weather-related, geopolitical or economic shocks. K demand, especially strong in Asian countries, is forecast to increase firmly, while global growth in demand for N and P is seen as modest, influenced by an anticipated drop in N demand in both China and India as well as a decline in P demand in China.

Global fertilizer demand will be slightly below 200 Mt in 2022/23

The medium-term outlook for world agriculture remains broadly unchanged compared with last year. Moderate growth in prices is expected for most agricultural commodities. In addition, more environment-friendly policies in China are expected to lead to a progressive contraction of domestic fertilizer demand. Successive reforms of India's national fertilizer strategy will start to impact growth in urea demand. Despite robust demand in Latin America and Sub-Saharan Africa, the current context indicates modest prospects for the expansion of global fertilizer demand in the next five years

Global demand is seen as expanding on average by 1.3% per annum (p.a.) between the base year (average of the three-year period 2015/16-2017/18) and 2022/23. It is projected to reach 199 Mt at the end of the outlook period. Consistent with past trends, global demand is forecast to grow faster for K (1.8% p.a.) than for P (1.4% p.a.) and N (1.0% p.a.) as a result of steady improvements in N management practices and more balanced fertilization in some regions.

Similar to last year, the highest rate of growth in demand is anticipated in Africa, followed by Eastern Europe & Central Asia (EECA) and Latin America. These three regions have the greatest agricultural growth potential in the decade to come. Growth in demand in South Asia is seen as below the historical trend, especially in the case of N owing to the Indian government's policy of improving urea use efficiency. West Asian fertilizer demand growth is highly speculative in view of the regional geopolitical context. In East Asia, N demand is anticipated to contract slightly and P demand to stagnate due to a reversal of trends in China following decades of strong growth. Total fertilizer demand in East Asia would still increase because of robust demand for K in Southeast Asia.

Fertilizer demand growth in developed regions is seen as weak, with better prospects in Oceania and North America than in Western & Central Europe. In volume terms, Latin America, South Asia, Africa and EECA would account together for 80% of the projected increase in global fertilizer demand during the outlook period.

FERTILIZER SUPPLY

Entering 2018…

World fertilizer market conditions in 2017 were relative weak, generating poor margins for the fertilizer industry. Demand was not high, while supply was plentiful.

Global fertilizer production and trade in 2017 reached record levels for virtually all products, with a few exceptions in the nitrogen segment. These conditions were exacerbated by soft demand in industrial sectors. On the supply side, as expected, massive capacity expansions occurred in 2017, especially in large exporting countries.

Total sales of primary nutrients in 2017 are estimated at 247 Mt. Fertilizer sales, which accounted for 75% of total sales, are estimated at 186 Mt nutrients, increasing by 0.4% over 2016.

The industry faces more supply-related regulation

Regulations required for the issuance of potash and phosphate mining permits, and requiring safety measures for nitrogen plants are becoming more stringent in many countries.

The combination of relatively low crop and fertilizer prices, the emergence of large exportable capacity and relatively subdued prospects for demand growth have created pressures on domestic fertilizer producers in many countries and led to an increase in trade defense measures or quality requirements for fertilizer products.

The trade tensions and economic sanctions that have been emerging since the beginning of 2018 risk generating ripple effects on global fertilizer trade and future investments.

Large capacity expansions in 2018-2022

Between 2018 and 2022 the fertilizer industry will invest close to US$98 billion in constructing 60 new production units, adding 78 Mt products of capacity.

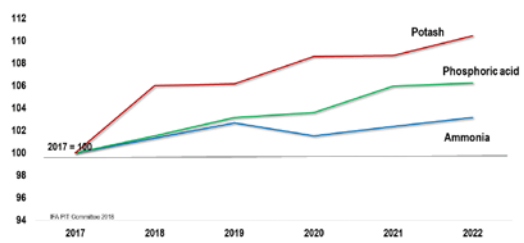
Investments are shifting from production assets to plant nutrient solutions, distribution infrastructure, customer/farmer services and added-value products.

Global supply adequate to meet demand in 2018-22, but restructuring in China is of major importance

Thanks to sustained capacity expansions since 2010, global supply will be more than sufficient to meet global demand during the next five years. Capacity would increase in the three main fertilizer segments, but more rapid growth is expected for potash (+10% over 2017) than for phosphoric acid (+6%) and ammonia (+3%).

There will be a dramatic reduction of N capacity in the next five years owing to massive plant closures in China.

Global Capacity Evolution from 2017 to 2022: Primary Nutrient Products



Near-term market prospects show a mixed outlook for the three main nutrient segments

Based on a modest 1.3% average annual growth in global demand, compared with 1.6% growth in supply, fertilizer markets will remain widely supply-driven while different structural imbalances will exist between the three main nutrient segments.

Nitrogen Outlook

Global ammonia capacity will be affected by plant closures in China

Global ammonia capacity is projected to expand by 3% (a net 7 Mt NH_3), from 225 Mt in 2017 to 232 Mt NH_3 in 2022. Large capacity increases are expected to come on stream in Africa, South Asia and EECA. The restructuring planned in China's nitrogen industry will lead to a massive closure of ammonia capacity.

The nitrogen supply/demand imbalance would be reduced after 2020

Between 2017 and 2022, global nitrogen supply would expand by an average of 0.6% p.a. with a 1.2% annual increase in demand. The prevalent surplus would peak in 2019 and start to decline gradually by 2020/21, as growth in supply slows towards 2022. The key driver of change would then be the reduced nitrogen capacity in China.

Growth in nitrogen demand presents opportunities for higher regional imports

Regional nitrogen demand would grow in all regions except Europe. The largest increases are projected in South Asia, Latin America and Southeast Asia.

Urea capacity will increase in the short term, with new incremental growth emerging after 2020

Urea accounted for 55% of nitrogen production in 2017. Global urea capacity is projected to increase by a net 10 Mt (+5%) to 226 Mt in 2022. Although urea capacity is projected to decline in China, new capacity will emerge in South Asia, Africa and EECA.

The imbalance between urea supply and demand would decrease towards 2022

Global urea supply (effective capacity) is estimated at 197 Mt in 2022, growing by 1.1% p.a compared with 2017.

Global demand for urea for all uses is forecast to increase by 1.6% p.a. to 188 Mt in 2022. Urea demand would increase in virtually every region.

Phosphate Outlook

The phosphate rock supply is increasing, with no shortage anticipated in the near future

The global phosphate rock supply is projected to grow by 9% compared with 2017, to 250 Mt in 2022. Africa and West Asia would together account for 80% of the net increase.

Supply and demand would both increase moderately in the near term

Global phosphoric acid capacity would increase by 6% compared with 2017, to 64.3 Mt P_2O_5 in 2022.

Global processed phosphates capacity is projected to increase by 3%, or 14 Mt products, to 112 Mt products in 2022. Morocco will account for one-third of the increase.

The global supply of phosphoric acid would increase by 1.9% p.a. compared with 2017, while demand would grow at 1.7% p.a. The potential surplus would increase marginally until 2019 and then plateau until 2022.

Potash Outlook

Continuing capacity growth between 2018 and 2022

Global potassium capacity is forecast to grow by an overall 10%, to 64.6 Mt K_2O in 2022. Capacity would mostly expand in EECA, North America and China while decreasing in Europe.

North America and EECA will account for 70% of potential potash supply

Global potassium supply would increase to 54.2 Mt K_2O in 2022, a net increment of 8 *Mt* K_2O *or* 17% growth compared with 2017. North America will be the region with the largest potential supply in 2022 (36%), followed by EECA (34%), East Asia (13%) and other regions (17%).

Moderate potash demand growth will lead to an increasing potential imbalance

Global demand for potassium for all uses would grow at 2% p.a. to 46.2 Mt K_2O in 2022. Potential global potash supply/demand conditions show a doubling of the potential annual surplus between 2017 to 2022 (8 Mt K_2O).

Expansion of regional deficits would support a sustained increase in potash trade by 2022

More than one-third of the near-term projected increase in demand will occur in East Asia. Rapid growth in imports is expected in South Asia, Latin America and Africa.

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