A/19/154
December 2019

INTERNATIONAL FERTILIZER ASSOCIATION

Short-Term Fertilizer Outlook 2019 – 2020

Market Intelligence and Agriculture Services
International Fertilizer Association (IFA)

IFA Strategic Forum

18-20 November 2019
Versailles (France)

This Public Summary was prepared by the Market Intelligence and Agriculture Services on the occasion of the IFA Strategic Forum held in Versailles (France) in November 2019. It draws on a report available after the IFA Strategic Forum to IFA members only: the IFA report “Short-Term Outlook for Fertilizers and Raw Materials: 2019-2020”.

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ECONOMIC AND POLICY CONTEXT

The International Monetary Fund has forecast global economic growth at 3.0% in 2019, its lowest level since the 2008-2009 financial crisis. Growth in 2020 is projected at 3.4%, which is 0.2% below what was forecast in April 2019.

Since the second half of 2018, global economic growth has been on a downtrend due to an uncertain policy and trade environment. Sustained trade tensions between the United States (US) and China, and Brexit negotiations between the European Union (EU) and the United Kingdom, remain major influences on business and consumer confidence. Global economic growth is forecast to rise in 2020 owing to expected economic improvement in several emerging markets.

2019 has been eventful on the policy level, with the first international resolution on nitrogen management, the first International Code of Conduct for the Sustainable Use and Management of Fertilizers, and several pieces of national legislation affecting nitrogen management.

WORLD AGRICULTURE

After setting a record in 2016/17, boosted by favorable weather, global cereal production contracted by 2% in 2017/18 and remained stable in 2018/19. Production was initially expected to rise firmly in 2019/20, but severe weather in the US reduced growth expectations to 0.6%. While wheat production is rebounding by 4% (after a comparable drop the previous season), production of coarse grains is now expected to decline by 1%.

Rice output is forecast to be stable. Global cereal consumption is expected to exceed production for the second time in 2019/20 and global stocks could continue to decline. While wheat and rice supplies would remain comfortable, coarse grains face a progressively tighter situation. During the first ten months of 2019, international maize prices were on average higher than in the corresponding period of 2018. On the other hand, wheat prices declined in 2019 under the pressure of additional supplies. Preliminary 2020/21 forecasts suggest that global wheat harvested area will not change much compared with 2019/20.

Global oilseed production is expected to fall by 4% in 2019/20, mainly as a result of a reduction in soybean output. Production of rapeseed, the second largest oilseed, is also anticipated to decline. This tightening of supplies is expected to support international soybean prices, but uncertainties related to US-China trade and the evolution of African swine fever could alter that outlook. After a weather-related drop in 2018/19, rapeseed production is expected to continue decreasing by 5% in 2019/20. Reduced output is explained by a contraction of area in the EU and Canada. Preliminary expectations for 2020/21 point to a partial recovery in planted area in the EU and further expansion in Ukraine. Global palm oil production increased by 3% in 2018/19 and is expected to grow at the same rate in 2019/20. Stocks accumulated significantly between 2016/17 and 2018/19, exerting pressure on palm oil prices.

FERTILIZER DEMAND

Since the sharp drop in Fertilizer Year (FY)[1] 2008 and subsequent rebound in FY 2009 and FY 2010, global fertilizer demand has grown at a slower pace.

[1] Countries report fertilizer consumption statistics either in terms of calendar years or in terms of fertilizer campaigns (12 months from month M in year Y to month M-1 in year Y+1). In this document, "Fertilizer Year or FY" refers to both.

This slowing of growth seems to have been driven, at least partly, by lower agricultural crop prices.

Other factors include government policies and weather in large consuming countries. Global fertilizer use was estimated at 190.1 Mt in FY 2017.

IFA estimates that global fertilizer use declined by 0.7% to 188.8 Mt in FY 2018 but expects a 0.9% recovery to 190.5 Mt in FY 2019. This decline and the subsequent recovery are explained for the most part by the significant drop in US fertilizer use in FY 2018 due to poor weather, followed by an expected recovery in FY 2019.

The largest regional variation in FY 2018 was in North America. However, other regions also experienced significant declines in fertilizer use in FY 2018: West Asia, Western and Central Europe (WCE) and East Asia. These reductions were only partially offset by increases in Latin America, South Asia and Eastern Europe and Central Asia (EECA). Fertilizer use in Africa rose only slightly.

In FY 2019 a strong recovery in fertilizer use is expected in North America. Gains are also forecast in South Asia and EECA. However, this growth will be partially offset by a significant expected decline in East Asia and smaller drops in WCE and Oceania.

Global Fertilizer Demand (Mt nutrients)				
	N	P_2O_5	K_2O	Total
FY 2016	107.1	45.4	35.9	188.5
FY 2017	106.4	46.3	37.4	190.1
FY 2018 (e)	106.5	45.3	37.0	188.8
Change	***+0.1%***	***-2.1%***	***-1.0%***	***-0.7%***
FY 2019 (f)	107.1	46.0	37.4	190.5
Change	***+0.6%***	***+1.4%***	***+0.9%***	***+0.9%***
FY 2020 (f)	108.1	46.5	38.3	192.9
Change	***+0.9%***	***+1.2%***	***+2.5%***	***+1.3%***

Preliminary forecasts for FY 2020 suggest a 1.3% growth in global fertilizer use to 192.9 Mt, based on expectations of higher crop prices and average crop conditions.

South Asia, East Asia (minus China), Latin America and EECA would lead the gains in fertilizer demand.

Between FY 2017 and FY 2020, global fertilizer demand is expected to increase by 1.5%, with stronger growth for K_2O than for N and P_2O_5.

South Asia would be the strongest driver, followed by Latin America, EECA and Africa. In relative terms, the fastest growing market would be EECA, followed by Africa, South Asia and Latin America.

FERTILIZER SUPPLY

World fertilizer supply in 2019 was affected by a number of production curtailments, as well as ongoing industry restructuring. Several plants have been shut down, or closures have been announced, across the three nutrient sectors, leading to slower global net capacity growth in 2019 overall. Global fertilizer market conditions were marked by lower natural gas prices in Europe and the US, weakening currencies in some fertilizer importing countries (such as Turkey, Argentina and Pakistan) and escalating trade tensions, new trade defense measures and tariff changes (affecting UAN in the EU, trade embargo in Ukraine and changes affecting export trade out of China).

Geopolitics (coupled with feedstock supply issues and capacity closures) continue to have an impact on operational performance, particularly in Latin America (Venezuela, Mexico and Brazil).

Several countries have announced new initiatives to mitigate greenhouse gas (GHG) emissions by implementing carbon taxes or emission trading schemes (ETS). The EU introduced Market Stability Reform in 2019. This will be followed by Emissions Trading System (ETS) IV from 2021 onward.

World primary nutrient supply in 2019 is estimated at 254 Mt *nutrients*, an increase of 1.2% compared with the previous year.

In 2019 there have been mixed operational performance results for the main fertilizer raw materials. Based on preliminary estimates, the 2019 global output trend is expected to show the following:

- ammonia production up by 2%;
- phosphate rock production steady;
- primary potash output down by 5%.

Fertilizer demand (78% of total demand) was estimated at 183 Mt *nutrients* in 2019 (calendar year basis), decreasing slightly by 0.3% compared with 2018. Net industrial uses and non-allocated tonnages totaled 51 Mt nutrients.

Prospects for 2020

World fertilizer demand would pick up in 2020, expanding at 1.9% after a year in which there was a reduction in consumption levels (-0.2% decline in 2019 based on preliminary estimates). In the calendar year 2019 nitrogen nutrient demand is expected to register marginal growth of +0.2%, whereas other segments are estimated to decrease at -0.2% for phosphates and -1.5% for potassium.

Global supply of primary raw materials (ammonia, phosphoric acid and potash) for all uses in 2020 would grow by 2.2% to 260 Mt *nutrients.*

Nitrogen Outlook

Global ammonia (NH_3) production in 2019 is estimated to have increased moderately by 2.1% to 181 Mt NH_3, mostly driven by higher production in Russia, the US and Indonesia.

It should be noted that in China, which accounted for 29% of global ammonia production, there was a 3% increase in output despite tighter environmental controls and feesdstock supply shortfalls. Growth in 2019 follows three consecutive years of decline in ammonia production in China.

Reductions in ammonia production were observed in West Asia, Africa and Europe. Following seven consecutive years of decline in ammonia production, Ukraine's ammonia output in 2019 appears to have recovered.

Global ammonia trade in 2019 was estimated at 19.4 Mt, a reduction of 3% compared with 2018.

Global ammonia capacity is projected to be 182 Mt *N* in 2020, compared with 181 Mt *N* in 2018. New ammonia capacity will be commissioned in 2019/20 in EECA, India and Nigeria, with a potential re-start of capacity in Mexico. Capacity shutdowns and restructuring takes place in Trinidad, Kuwait, Brazil, Romania and China.

The global nitrogen balance in 2019 indicates an increase in the potential surplus due to a substantial supply increment (+2.1 Mt *N*) and modest demand growth (+0.9 Mt *N*). In 2020 the global nitrogen imbalance is expected to shrink moderately, reaching 10.8 Mt *N* of potential surplus. This pending imbalance, equating to 7% of potential supply in 2020.

World Nitrogen Supply/Demand (*Mt N*)			
	2018	2019	2020
Supply	153.8	155.9	157.6
Demand	143.9	144.8	146.8
Balance	***9.9***	***11.1***	***10.8***

Urea outlook

World urea production in 2019 is expected to increase by 2.4% to 176 Mt, based on preliminary estimates. Excluding China, which accounted for 31% of global production, world urea output rose 2.2% to 122 Mt thanks to higher production in Russia, Ukraine, the US, Indonesia, India and Pakistan. On average, the global urea industry operated at 85% of nameplate capacity.

It should be noted that urea production in China is estimated to have recovered in 2019 after three consecutive years of decline in domestic output driven by rising costs, weakening domestic nitrogen nutrient consumption, and reduced export opportunities.

Global exports of urea in 2019 are expected to increase marginally by 0.6%, from 48.3 Mt in 2018 to 48.5 Mt, based on preliminary estimates.

The main trade feature in 2019 was the return of China's urea exports, up to 4.3 Mt, which would account for 9% of global exports in 2019 compared with 5% in 2018. Urea exports have increased significantly in Indonesia, as well as in Canada and Ukraine.

Global urea capacity is projected to be 208 Mt in 2019 and 213 Mt in 2020, growing by an overall 1% compared with 2018. New urea capacity additions between 2018 and 2020 are seen in India, and in EECA, Nigeria, with a potential re-start in Mexico (provided feedstock supply issues are resolved). China's urea capacity would decrease by 2.4 Mt during 2018-2020.

Global urea supply (effective capacity) is estimated at 181 Mt in 2019 and 186 Mt in 2020. Global demand for urea for all uses would increase moderately in 2019 (171 Mt), growing in 2020 to 173 Mt.

The derived balance for 2020 shows an increase of potential surplus to 13 Mt, equating to 7% of potential supply.

World Urea Supply/Demand (*Mt urea*)	2018	2019	2020
Supply	183.1	181.3	186.2
Demand	170.2	171.1	173.2
Balance	***13.0***	***10.2***	***13.0***

Phosphate Outlook

Global phosphate markets in 2019 have been characterized by steady demand for phosphate rock, while production of phosphoric acid and processed phosphates (MAP, DAP, TSP) has recovered, based on preliminary estimates. At the same time, global phosphate nutrient demand is expected to show a 0.2% year-on-year decrease compared with 2018.

Exports of phosphate rock in 2019 are expected to have declined by 3% to 30 Mt based on preliminary estimates, compared with 31 Mt in 2018.

Global production of phosphate rock in 2019 is expected to remain flat year-on-year at 207 Mt, following a year of negative growth in 2018.

However, global phosphoric acid output is expected to increase by 1% to 47 Mt P_2O_5.

Global production of processed phosphates (MAP, MES, DAP and TSP) in 2019 is expected to increase to 35.6 Mt P_2O_5 (74 Mt products) thanks to rising output of MAP (and MAP+) and strong recovery in DAP production (+9% year-on-year).

Global phosphoric acid capacity is projected to expand in 2018-2020 by an overall 1.1% compared with 2018 (+0.7 Mt) to reach 60.4 Mt P_2O_5 in 2020.

Incremental processed phosphate capacity in 2018-2020 will mainly occur in Morocco, Saudi Arabia and Egypt. Capacity expansion is also seen in Russia, Brazil, India and Turkey. Restructuring of phosphate capacity is expected in China due to tighter market conditions in the international market, stricter regulation of phosphogypsum, and a slowdown of domestic fertilizer demand.

Global processed phosphates capacity is projected at 48.1 *Mt* P_2O_5 in 2019 and 48.3 Mt P_2O_5 in 2020. In 2019/2020 some capacity would be shut down or mothballed in North America.

Global phosphoric acid supply in 2020 is expected to increase to 50.4 Mt P_2O_5, a 2.7% increase compared with 2018 (49.1 Mt P_2O_5).

Global phosphoric acid demand for all uses is estimated at 47.4 Mt P_2O_5 in 2020, compared with 46.5 Mt P_2O_5 in 2018, representing annual growth of 1.1%. Global phosphate nutrient demand is projected to decrease by 0.2% in 2019 and to increase by 1.9% in 2020.

The estimated supply/demand imbalance will marginally increase between 2018 and 2020, to reach a potential surplus of 3.0 Mt P_2O_5 in 2020; this level equates to 6% of global potential supply, compared with 5% in 2018.

World Phosphoric Acid Supply/Demand (*Mt P_2O_5*)	2018	2019	2020
Supply	49.1	49.3	50.4
Demand	46.5	46.4	47.4
Balance	***2.6***	***2.9***	***3.0***

Potash Outlook

Following two consecutive years of growth in global potash production (+8% in 2017 and +3% in 2018), world primary potash production in 2019 is expected to decline by 5% to 40.9 Mt K_2O in response to weak market fundamentals and negative potash demand, based on preliminary estimates. Global production of muriate of potash (MOP) in 2019 is estimated to have fallen by nearly 6% to 65 Mt product, driven by the slowdown in import demand and resulting subdued exports.

Home deliveries of potash (MOP) in 2019 are expected to remain relatively stable, with a marginal decrease of 0.4% year-on-year to 15 Mt. At the same time global MOP exports in 2019 are expected to fall to 50 Mt based on preliminary estimates.

Global potash capacity in 2019 would expand marginally by 0.2% compared with 2018 to 60 Mt K_2O. In 2020 global potash capacity is projected to expand by 5% over 2019 to 63 Mt K_2O. The bulk of this increase will come from commissioning of new capacity in Russia.

Between 2018 and 2020 global potash supply is projected to increase by 7% (+3.5 Mt K_2O) to reach 52 Mt K_2O by year-end 2020. Weak market fundamentals have prompted a series of potash supply curtailments during 2019 in response to slow-to-negative growth in the key consuming markets.

Global potassium demand (for both fertilizer use and industrial applications) is projected to decrease by 1.1% in 2019, followed by a recovery of 3.4% in 2020 (reaching 44.3 Mt K_2O in 2020).

The derived potash supply/demand imbalance shows a larger imbalance developing in 2020 (reaching 7.8 Mt K_2O by late 2020); this level would equate to 15% of potential global supply.

Global MOP trade in 2020 is projected to recover along with improved potash demand globally, and to return to the 2017/18 levels of 53 Mt MOP, supported by improved import demand in South-east Asia and Brazil.

The global potash market will likely remain supply-driven in the near term since new capacity projects in Russia and Belarus would provide substantial potential supply, mostly dedicated for export.

World Potassium Supply/Demand (*Mt K_2O*)			
	2018	**2019**	**2020**
Supply	48.5	49.2	52.1
Demand	43.3	42.9	44.3
Balance	**5.2**	**6.4**	**7.8**

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