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Changing trends in the African NPK market

The African NPK market, which imports in excess of 2mn t/yr of various NPKs, is becoming increasingly important as it shows significant growth potential. One of the main reasons for this is the growing population in sub-Saharan Africa. Agricultural output in Africa is not yet able to meet this growing demand for food for various reasons, including poor soil conditions, a lack of infrastructure and high costs.

This opens opportunities for more balanced fertilization, which are being seized by a number of market players, not least Morocco's OCP, which has a dedicated African strategy that is proving successful. The need for more balanced fertilization is also demonstrated in the changing consumption of NPK grades in some countries, while increased NPK consumption is being witnessed in others.

Demand – Tenders

Much of African demand is met through tenders, which amount to more than 1.7mn t/yr. The African tender season typically begins in August and runs through to the end of October, although most tenders are announced in September-October.

A number of tenders announced this year show some interesting changes in terms of grades and volumes, demonstrating the importance of balanced fertilization in this market.

The largest tender in Africa takes place in Ethiopia — a market that has shown significant growth potential in recent years. Previously, Ethiopia tendered for DAP over NPS, or a mixture of both, but in the last two years, it has only tendered for NPS at the expense of DAP. And the country's intake of NPS has grown, with its 2016-17 requirements increasing to around 670,000t compared with under 400,000t in 2015-16.

In Mali, CMDT issued tenders for 157,000t, 15pc more than it requested for the previous year. More interestingly, the company, which usually tenders for some 15-15-15, switched its requirement to 17-17-17.

In Benin, the annual 2015-16 tender requested 40,000t of 14-23-14+5S+1B. But for 2016-17, the volume rose significantly to a total of 125,000t of NPKSB. And the grades requested were different — 100,000t of 14-18-18+6S+1B and 25,000t of 13-17-17+6S+0.5B+1.5Zn.

FIGURE 1: MAJOR AFRICAN TENDERS 2015-2016/2016-2017 COMPARISON

Country	Season	Grade 1	Grade 2	Grade 3	Total volume '000t	Issuer
Benin						
	2015-2016	14-23-14+5S+1B			40	Sonapra
	2016-2017	13-17-17+6S+5B+1.5Zn	14-18-18+6S+1B		125	AIC
Burkina Faso						
	2015-2016	14-18-18+6S+1B	15-20-15+6S+1B	13-17-17+5S+1B+3.5MgO	100	Sofitex
	2016-2017	14-18-18+6S+1B			115	Sofitex
Ethiopia						
	2015-2016	17.7-35.5-0+7.6S+2.2Zn	18.9-37.7-0+7S+1B	19-38-0+7S	474	AISE
	2016-2017	17.8-35.7-0+7.7S+1B+2.2Zn	18.9-37.7-0+6.95S+1B	19-38-0+7S	670.83	EABC
Mali						
	2015-2016	14-18-18+6S+1B	15-15-15		137	CMDT
	2016-2017	14-18-18+6S+1B	17-17-17		157	CMDT

Demand – Increasing consumption

West African NPK imports have been increasing. The latest GTIS data show that total NPK deliveries to Senegal in 2016 rose by 112pc from a year earlier to 21,528t. NPK deliveries to Ghana increased by a staggering 211pc year on year, to 144,981t in 2016.

Supply – New capacities

Supply of DAP/MAP/NPKs to Africa has increased significantly over the past year and looks likely to continue rising in the next couple of years. The bulk will come from OCP, which has already dedicated its first 1mn t/yr DAP/MAP/NPK unit to the African market. This is the first of four new plants which was inaugurated on 1 February 2016, and is part of a larger expansion plan that has been split into two phases.

Construction of the first phase took from 2013 to July 2015 and added 4mn t/yr of DAP/MAP capacity. Three 1mn t/yr units have been commissioned so far, with the fourth unit expected to be commissioned in the second half of 2017.

The second phase of the expansion will begin in 2020, with six proposed DAP/MAP units to be built adding capacity of 6mn t/yr. This will make OCP the single largest phosphates producer in the world.

OCP's African strategy pays dividends

OCP has secured several new supply deals, swept up major African tenders and announced plans to build new plants in the continent during the past year.

In April it emerged that OCP secured a deal to supply 100,000t of 12-24-12 to Angola under an inter-governmental deal, giving the Moroccan producer the lion's share, if not all, of the Angolan NPK market, and leaving little room for imports from elsewhere.

This agreement follows a similar deal struck with the government of Guinea in March, whereby OCP will supply its annual phosphates/NPK demand, estimated to be around 100,000t for 2017, of which 20,000t will be gifted for the year. The first 15-15-15 cargo arrived at Conakry in April.

And the company signed an agreement with the Nigerian government in December 2016 to supply Nigerian blenders with raw materials to produce 1mn t of NPKs. As part of the deal, OCP has committed to developing NPK formulae suitable for Nigeria, and to support the development of the local blending and logistics industries.

In addition to these inter-governmental deals, and in a bid to win market share, OCP has adopted a rather aggressive pricing strategy that has helped the producer successfully supply a number of major African tenders. The most notable and largest was for Ethiopia, to which OCP will deliver around 671,000t of various NPS. OCP is also supplying 100,000t of 14-18-18+6S+1B to Benin under AIC's tender.

OCP Africa's operations comprise:

- **Agronomics**

  Supporting sustainable and precision farming through products adapted to local soils and crops. This requires soil mapping, R&D partnerships with research institutes and local farming operators, test campaigns and training.

- **Production**

  Guaranteeing a supply of fertilizers with production units as close as possible to major farming areas. This involves the construction of production units close to consumer markets, producing fertilizers adapted to the requirements of African soils. OCP said these projects will support agricultural development and generate local value and jobs.

- **Logistics**

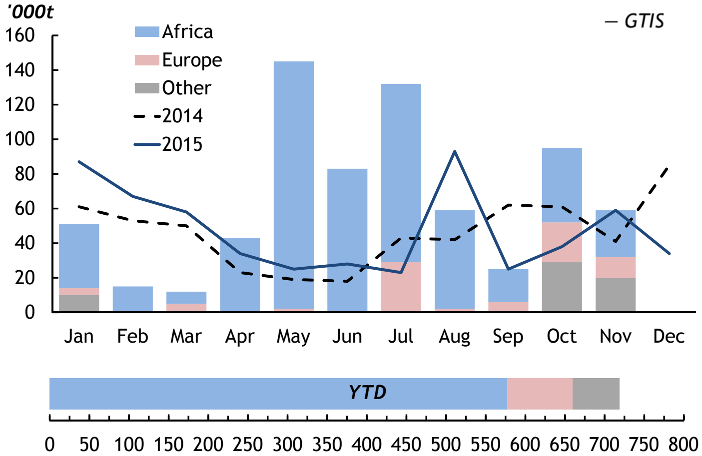
  Guaranteeing farmers appropriate products in a timely fashion, in sufficient quantity and at the right price through storage facilities close to consumer markets and a network of distributors.

- **Marketing and sales**

  Use of the latest sales and marketing technology, particularly in terms of the internet and mobile phones.

OCP's success in Africa was reflected in its 2016 financial results, which showed that its exports within the continent grew by 70pc from a year earlier to 1.7mn t. OCP also noted that its sales of speciality products rose by 45pc from a year earlier and represented a quarter of its total fertilizer exports last year. The rise in speciality sales reflects OCP's efforts in developing and marketing a broad range of speciality products, notably in Africa, through various initiatives including soil fertility maps and public-private partnerships. Such grades include cotton formulations as well as customised grades for maize in Kenya and Nigeria, and cocoa formulations in Nigeria and Ivory Coast.

FIGURE 2: MOROCCO NPK EXPORTS BY DESTINATION



In addition to focusing on supplying compound NPKs, OCP plans to expand its presence in the African blending market. The firm signed an initial agreement with Rwanda's agriculture ministry in October 2016 to develop and build a fertilizer blending facility in Rwanda for early 2018 start-up, although no further details have been disclosed regarding the planned capacity of the project.

And OCP and Ethiopia's public enterprise ministry signed a partnership agreement in November 2016 to develop a 3.5mn t/yr fertilizer facility in the east African country to produce ammonia, urea and fertilizers, using local gas and Moroccan phosphate. Production is expected to start in 2022.

OCP will also develop a 1mn t/yr NPK fertilizer plant in Nigeria in collaboration with Dangote Group. These planned facilities are in addition to the extra capacity that OCP has brought on line. An additional 2mn t/yr of Moroccan DAP/MAP/NPK capacity came on line last year — including the Africa-dedicated plant — with another 1 mn t/yr being commissioned. A further 1 mn t/yr is expected to come on stream before the end of this year.

Looking ahead, OCP shows no sign of relenting in the African market. Its aggressive strategy and target of meeting all Africa's phosphate needs will leave little opportunity for other players in the market. But opportunities will remain on NPKs for grades that OCP cannot produce such as high nitrogen content grades.

The switch to NPK grades by OCP also reflects a wider stagnation in the phosphates market. The DAP and MAP markets have become commoditised, with flat demand for DAP in India because of high prices and an eroding subsidy, leading to lower demand and imports. MAP is dominated by the Brazilian market, which has been affected by currency issues, recent economic and political turmoil and lacklustre crop prices. And the market has become far more competitive, with the transformation of China from being a net importer as recently as 2006 to becoming the world's largest DAP exporter, pushing traditional suppliers to diversify into new products and regions. By producing more NPKs and concentrating on Africa, OCP has lessened its dependence on key DAP/MAP export markets in Europe, the US, Brazil and India.

Perhaps the best and most singular example of this is Ethiopia. Traditionally a 500,000 t/yr DAP import market, it was highly competitive, with Russian and Saudi material competing with Moroccan DAP. By turning Ethiopia into an NPS market, OCP has garnered almost total market share and a strong foothold on the east coast of Africa. Indeed, Ethiopia has previously sourced NPS from Russia and Turkey in addition to Morocco, but Ethiopia is sourcing only from OCP this year. Saudi producers are expected to respond with their own NPS, but OCP has stolen a march on the market in the meantime.

Supply – Saudis eyeing African market

Saudi producer Ma'aden is developing the $7bn Wa'ad al-Shamal phosphate joint-venture project with local chemical firm Sabic and US fertilizer producer Mosaic. The plant will have 3mn t/yr of fertilizer granulation capacity, including the ability to produce DAP/MAP/NPKs/NPS, and is due to be completed this year.

Africa, in particular east Africa, would be an obvious market for the Saudis once the facility comes on stream this year.

Blends vs Compounds

Africa is both a blend and a compound market. Local blenders have a key advantage in supplying African demand because blended product is usually cheaper than imported compound NPKs. Compound NPKs typically attract a price premium to blended NPKs because they are deemed to be of higher quality. They generally have consistent bulk density and a tight specification, as well as good strength, making them suitable for long seaborne trade. Blends are manufactured by mixing fertilizer raw materials of a similar size, and are more susceptible to caking, dustiness and segregation.

Blends are typically cheaper, but blend prices are much more volatile as they are more exposed to instability in the raw material markets and fluctuations in raw material prices compared with compounds.

Indeed, the relationship between the west Africa 15-15-15 compound cfr price and the west Africa 15-15-15 blend price reversed at the turn of this year, with the blend price moving to a premium supported by rising raw material prices, while the compound price was relatively flat.

Compound prices have since increased and stabilised at $255-265/t cfr, while the blend price has fluctuated repeatedly. For example, at the turn of this year blends were priced at around $226-249/t cfr, rising to $240-259/t cfr a month later, only to be followed by a fall to $230-246/t cfr by the end of February. Using the midpoint of these ranges, the blend price increased by $12/t and fell by $11.50/t within two months.

FIGURE 3: AFRICAN 15-15-15 PRICE COMPARISON