Phosphates 2017

More than 400 delegates from 36 countries gathered at the Marriott Tampa Waterside Hotel, Tampa, Florida, 13-15 March, for CRU’s Phosphates 2017 conference.

The 2017 price rally

The recent sharp recovery in finished phosphates prices – and whether this would be sustained – was a major talking point throughout the three-day conference. Spot prices increased from around $325/t at the end of last year to $375-400/t by mid-March, based on NOLA diammonium phosphate (DAP) and Brazil monoammonium phosphate (MAP) benchmarks.

Walter Precourt, senior vice president, phosphates, at The Mosaic Company turned the spotlight on the 2017 price rally during his opening keynote on the global outlook. He described it as a “buying rush in a rising market” and linked this to:

- Low channel inventories worldwide
- Uncovered commitments for the current application season
- Declines in Chinese export availability
- Jumps in raw materials costs
- Ship loading delays at Jorf Lasfar, Morocco

Precourt expected the momentum behind the rally to continue during the first half of 2017, with more upside than downside risk. Agricultural demand drivers such as nutrient affordability and soybean, palm oil and cotton prices all continue to look positive. Mosaic is currently predicting global phosphate deliveries of 67-68 million tonnes this year. Chinese exports, which are projected to drop to around eight million tonnes in 2017, should also help keep the supply/demand balance tight.

Beyond 2017, demand prospects continue to look strong over the next five years, with forecast annual growth of around two percent. On the supply side, no new large-scale projects are expected after 2018. Following completion of OCP’s Jorf Lasfar expansions and Ma’aden’s Wa’ad Al-Shamal project, the next wave of new capacity from Morocco and Saudi Arabia is not expected until after 2021. A restructuring of the Chinese phosphates industry is also expected to see China’s exports and production stabilise at a lower level.

“The in the next five years we expect to see a rebound in Indian use and strong gains in Brazil and we think other regions such as Africa and Asia [ex China] will also post solid gains,” commented Precourt. “We think there’s a closeness between the additional capacity that’s coming on the market and overall demand, such that the balance is pretty reasonable.”

Shares also rally

Ben Isaacson, equity analyst, global fertilizers, at Scotia Capital gave the view from the capital markets. The majority view among investors is that DAP prices and phosphate producer margins will remain either flat or move slightly lower this year. Isaacson highlighted the rally in fertilizer stocks over the last 12 months. Mosaic and PhosAgro outperformed their peers with year-on-year stock price increases of
30 percent and 27 percent, respectively. Equity investors tend to view nitrogen as the best performing industry segment and potash as the worst — with phosphates occupying the middle ground. Nearly two-thirds of institutional investors, for example, believe nitrogen has the best outlook over the next five years, whereas just over half believe potash has the worst outlook. Looking ahead, while investors are confident phosphates will not be the best performing segment over the medium-term, suggests Isaacson, they are equally confident it will not be the worst performing nutrient either.

Isaacson summed up by asking delegates: “Are you a bull or a bear? I’ll leave that up to you.”

On the bearish side, he pointed out: “It’s not clear that fertilizer prices have bottomed. Balance sheet leverage has risen as earnings have declined. While peak capex is behind us, there’ll be another $11-12 billion of capex spend by the majors over the next few years. There’s a wave of extra potash capacity over the next 18 months, new phosphates supply will also hit the market, and it’s not clear if demand growth will soak all that up. There’s significant nitrogen capacity with respect to urea — we have [supply at] 2-3 times demand growth hitting the market in 2017 alone.”

On the bullish side, he added: “Fertilizer prices have been rising. Fertilizer demand growth remains strong despite weaker farm economics. Chinese nitrogen and phosphate closures have been tightening the market. Many potash producers are sold out. Debt is mostly long dated. Phosphate and potash industries are being concentrated with opportunities for further consolidation. And stocks are trading at deep discounts to replacement costs.”

Closing the chasm

The question of whether China can close the chasm between capacity and demand was the main theme of the phosphates market outlook from Chris Lawson, CRU’s head of phosphates. He also asked how much longer the current “price rally in a perfect storm” can be sustained.

The rally has seen DAP prices invert after sustained declines stretching back two years. The fall in Chinese DAP to below $300/t at the end of 2016 — for the first time in four years — helped spark the current rally, suggested Lawson. Some 8-10 producers in China reacted by announcing production curtailments. The Chinese industry also agreed to reduce operating rates to 65-70 percent during 2017. Consequently, DAP prices (f.o.b. Tampa), which had languished at close to $310/t in December 2016, rose steadily during January-March, as impressive global demand and ship loading issues tightened availability. Rumours of a DAP subsidy increase in India also helped fuel the rise.

CRU believes the rally is unlikely to last as 2017 progresses, due to downward pressure from a number of supply-side factors. These include:

- The startup of unit III at OCP’s Jorf Lasfar Hub
- The return of China to the market with no export tax
- The recovery of Tunisian phosphate rock production
- The start of testing at Ma’aden’s Wa’ad Al Shamal project toward the middle of this year and its ramp-up in 2018

CRU expects to see a wave of new phosphoric acid production capacity in the Middle East and North Africa between now and 2021. This will see global capacity grow by 2.4 percent annually over the next five years. This will add to the growing chasm between global phosphoric acid capacity and demand that dates back to 2013. However, a rationalisation in Chinese capacity could help close this chasm, suggested Lawson.

Chinese DAP producers occupying the third quarter of the cost curve have been operating at a loss. Some of the country’s DAP production, concentrated in Hubei, Yunnan and Guizhou regions, is therefore being idled — but could return in response to rising prices.

Looking ahead, CRU estimates that 3.5 million tonnes (P2O5) of Chinese phosphoric acid capacity is at a medium-to-high risk of permanent closure over the next five years. The loss of this capacity, if it were to occur, could spur a much-needed tightening of the global market. Chinese DAP and MAP utilisation rates are also expected to fall to 65 percent and 50 percent, respectively, over this period.

On the demand side, lower prices have helped boost demand. But significantly higher demand growth is likely to be necessary over the next five years to close the chasm with supply. CRU estimates that, to balance the market by 2021, demand needs to grow by close to one million tonnes P2O5 every year— equivalent to a 2.1 million tonne increase in DAP consumption annually.

Chinese diversification

The Chinese phosphate market is facing the twin challenges of long-term oversupply and declining domestic demand, says Isaac Zhao, senior CRU consultant.

China’s production capacity for finished phosphate fertilizers amounts to around 21-22 million tonnes P2O5 currently. The country’s total capacity increases to around 24 million tonnes P2O5, once 2.5 million tonnes of additional feed phosphate and purified wet acid (PWA) capacity is factored in. This leaves China with roughly 10 million tonnes P2O5 of excess capacity above its domestic consumption needs.

Redirecting this excess capacity away from DAP, MAP and triple superphosphate (TSP) production will require a strategy of diversification, argues Zhao. Indeed, China’s producers are already looking to diversify, prompted by the downward pressure on DAP and MAP margins. Tightening of environmental regulations have significantly increased production costs, and even forced some smaller Chinese phosphate plants to close.

A shift to NPK production is currently the primary choice for diversification. Other options for producers include a move into feed phosphates, PWA or value-added fertilizer markets. Overseas investment offers another way of diversifying.

Shifting to products with reasonable margins, and ensuring production methods are not environmentally damaging, will be key in putting China’s phosphate industry on a more sustainable footing, concludes Zhao.

Beyond China and India

The era of large countries driving phosphate demand growth appears to be over, reported Andy Jung, Mosaic’s director for market and strategic analysis. Instead, a more broad-based rise in phosphate demand is likely in 2017 in his view.

Although China and India once fuelled phosphate demand growth almost single-handedly, they have mainly acted as a drag on global phosphate deliveries in recent years. Fortunately, this has been offset by increased consumption elsewhere.

India and China combined were responsible for 90 percent of the growth in deliveries (5% p.a.) between 2005 and 2010. Deliveries to India subsequently fell back between 2010 and 2015 (-4.6% p.a.) and deliveries to China declined sharply last year (-6.8% year-on-year).
Mosaic is not expecting much of a demand stimulus from either country this year. While India and China did clear out their distribution pipelines last year, their demand for phosphate has tended to dis-appunt, said Jung.

Phosphate deliveries to Brazil, in contrast, are expected to reach record levels in 2017. This is being driven by the high prices of agricultural commodities in local currency. Deliveries of DAP, MAP, NPS and TSP to Brazil are expected to reach 8.5 million tonnes this year, a 10% rise on 2016 deliveries (7.9 million tonnes).

“We expect profitable farm economics [in Brazil] will drive a second consecutive year of record setting high-analysis phosphate shipments in 2017,” commented Jung.

Argentinian phosphate demand, which surged in 2016, is also poised for a very strong 2017, according to Jung. Pakistan’s healthy and profitable agricultural sector has become another important demand centre. Phosphate deliveries in Pakistan reached a record 2.225 million tonnes in 2016, some 23 percent up on 2015, driven by DAP subsidy support. CRU and Mosaic expect Pakistan phosphate demand to reach a healthy 2.25 million tonnes this year.

African phosphate demand has also been “quietly growing” since 2015 and should exceed two million tonnes in 2017. Finished phosphates imports, excluding South Africa, were in excess of one million tonnes last year. Elsewhere, Vietnam, Thailand, Turkey and Russia – where nutrient demand is booming – are also emerging as growing phosphate markets.

The overall global demand picture also remains positive, concluded Jung, thanks to record agricultural production. World grain and oilseed output reached new highs in 2016. The removal of primary nutrients from the global harvest last year, likely to be in excess of 10 million tonnes for main crops, will need to be replenished. At the same time, phosphates and other nutrients remain affordable by historical standards.

Favourable fundamentals in Eurasia

Eurasia is vast. It consists of 93 countries, contains three-quarters of the world’s population and possesses 60 percent of global arable land. Irina Evstigneeva, PhosAgro’s marketing and development director, therefore made the practical choice of focussing on the markets of the Commonwealth of Independent States (CIS) in her presentation. This cluster of states includes Armenia, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan.

CIS phosphates production (DAP/MAP, NP/NPS) reached 4.6 million tonnes in 2016. Regional phosphate demand also accelerated to 1.7 million tonnes P2O5 last year.

The growth in fertilizer consumption in Russia in 2016 helped push up crop yields. Russian cereal (+24%) and oilseed yields (+16%) last year, for example, were well above the 10-year average, as were those of sugar beet (+47%) and feed corn (+21%).

CIS production remains globally competitive and is set to grow in the short term, advised Evstigneeva. The region’s producers, PhosAgro, Acron and EuroChem, have access to high-quality phosphate rock and are investing in on-site integration with ammonia. They are also able to combine production flexibility with a diverse product offering.

CIS producers have sought to capitalise on their favourable fundamentals in three main ways: by making upstream and downstream investments; integrating into wholesale and retail operations internationally; and by continuing to develop improved and more effective fertilizer products.

Home markets have also become increasingly important to Eurasian producers. The strong growth in CIS agriculture in recent years has helped domestic market sales. Russia harvested 260 million tonnes of cereals, sugar beet, oilseeds, potato, vegetables and feed corn last year, a 27 million tonne rise on 2011. Russian fertilizer demand has been supported by state subsidies for agriculture (worth one billion roubles in 2016), restrictions on food imports and the positive impact of the rouble’s devaluation on farm economics.

Rising application rates and farming land expansions in CIS countries should support domestic fertilizer demand going forward. The region is expected to consume two million tonnes more phosphate fertilizers by 2021, Evstigneeva concluded.

African distribution

The African Fertilizer and Agribusiness Partnership (AFAP) is currently working in five ‘gateway’ countries in Sub-Saharan Africa, namely Kenya, Tanzania, Mozambique, Ghana and Cote d’Ivoire. The Partnership is funding, training and advising fertilizer distributors in these countries, explained Jason Scarpone, AFAP’s president and CEO. It is also piloting a two-year fertilizer trade finance programme.

AFAP is helping to set up a network of ‘hub’ agro-dealers in Africa to improve fertilizer distribution. These hubs will act as supply chain intermediaries between large-scale fertilizer suppliers/importers and small, rural ag-dealers. The overall aim is to increase fertilizer storage capacity in Africa and stimulate demand.

Intermediate scale hubs help lower costs for importers by reducing the number of points of sale. Also, being more local, hubs are better placed to supply and support rural ag-dealers further down the supply chain.

Agribusiness outlook

Some unusual new realities were highlighted by Terry Barr, senior director at CoBank: “The unusual thing, at this point in time, is the epicentre of uncertainty is now the US, and that’s kind of an anomaly. If you look back over the last two or three years, we’ve spent most of our time talking about the Middle East, about China. But a lot of that uncertainty now is really centred on the US.”

Agriculture in the US is highly export dependent with China and Mexico being the top two markets for many US grain, oilseed and meat products. That makes the state of trade relations with both countries a cause for concern. The debate on the 2018 Farm Bill, and the level of funding available, has also begun in the US.

Although President Trump has issued 22 far-reaching executive orders to date, Barr highlighted the constitutional restraints: “The President proposes and Congress disposes with the Supreme Court checking both.”

It is not just the direction of US domestic and foreign policy that is adding volatility to global growth expectations. Agribusiness is facing a broad range of global uncertainties, suggested Barr. The growth path of China’s economy, for example, remains an enigma in his view. The future of the EU and the Euro are also linked to the uncertain outcome of both Brexit nego-
tions and national elections in Europe. Despite this, there is optimism that global economic growth will be solid in 2017-18, although downside risks remain. In the agricultural commodities market, global coarse grains, wheat, soybean and cotton volumes were at record highs last year, although the strong dollar has affected US competitiveness.

A shift in land acreage is taking place in the US with more soybean being grown and less corn. The decline in the wheat growing area is also continuing. This has seen the wheat industry downsize aggressively. Looking ahead, US farm incomes are likely to recover slowly and return to 2010 levels, advised Barr, unless supply side changes were to intervene.

Prevailing trends could, however, drastically alter the agribusiness sector over the next three years. Mega mergers, new technology, farm consolidation, global economic conditions and tax and regulatory reforms could all reshape supply chains by 2020, concluded Barr.

Feed phosphates market

The global demand for feed phosphates has remained flat over the last decade, despite a growing requirement from live-stock feed production, explained CRU’s Chris Lawson. While feed market fundamentals have been supportive of growth, this has failed to translate into greater phosphate demand.

The picture is more mixed regionally, however, with Russia showing feed phosphate demand growth and China experiencing a demand slowdown since 2012.

Global feed phosphates production is in excess of three million t/a P2O5 and is broadly divided between three product groups:
- Dicalcium phosphate (DCP)
- Monocalcium phosphate/monodicalcium phosphate (MCP)/MDCP
- Defluorinated feed phosphate/tricalcium phosphate (DFP/TCP)

About a third of global production (one million tonnes P2O5) is traded internationally every year. CRU expects growth in traded products to be modest over the medium term. Nonetheless, MCP exports have been increasing at the expense of DCP, and now account for around three-quarters of exports volumes.

China has been responsible for most of the growth in world feed phosphates production over the last 15 years. Chinese production increased from 0.5 million tonnes P2O5 in 2000 to more than one million tonnes by 2010. Lomo is China’s largest producer, followed by SinoChem and Chanhen.

The global production share for MCP/MDCP (47%) has increased by seven percentage points since 2012, edging out DCP’s production share (45%), which has fallen by 10 percentage points over the same period. DFP/TCP has a global market share of under 10 percent currently. DCP consumption has sharply declined in the US market, a trend that is likely to be followed by other major consuming countries. China’s production is also steadily shifting towards MCP/MDCP, although DCP manufacture still predominates.

New capacity on the horizon includes three projects from EcoPhos in France (220,000 t/a DCP capacity), India (220,000 t/a DCP capacity) and Egypt (60,000 t/a DCP capacity). In China, Yunnan Phosphate Chem (150,000 t/a MDCP capacity) and Chuanninuo (50,000 t/a MCP capacity) are also proceeding with projects. Ma’aden has, however, decided against developing 500,000 t/a of feed phosphates capacity as part of its Wa’ad Al-Shamal project in Saudi Arabia, at least for the time being.

The extra feed phosphates capacity coming on-stream over the next few years, against a backdrop of stagnant demand, should make the market increasingly competitive. The declines already seen in feed phosphate prices, from $700/t to $500/t (DCP f.o.b. US) between 2012 and 2015, have cut the premiums enjoyed over fertilizers such as DAP. Looking ahead, market conditions will cap prices and maintain the current squeeze on premiums, in Lawson’s view.

Industrial markets

Willem Schipper of Willem Schipper Consulting helped unravel the complexities of non-agricultural markets for phosphorus. Non-ag uses account for around 10% of the global phosphates market and include:
- Feed phosphates
- Food phosphates
- Technical phosphates and detergents
- Markets for derivatives of elemental phosphorus (P4)

Global P4 capacity is concentrated in China (600,000-800,000 t/a) with other centres of production in the US and Kazakhstan (both 80,000-90,000 t/a) and Vietnam (80,000 t/a).

A range of derivatives are manufactured from P4 via the thermal phosphoric acid (TPA) production route using arc furnaces. Major uses for these derivatives include glyphosate, lithium-ion batteries, flame retardants, anti-wear engine oil additive (ZDDP), electroless nickel plating, detergents and industrial water treatment. Overall demand for these applications is flat to slightly growing. The largest markets for P4 and its derivatives are China, Japan, the US and the EU.

Purified wet acid (PWA), sourced from conventional merchant grade acid (MGA), is the starting point for feed phosphate production. PWA also directly competes with TPA in the food phosphates and technical phosphate segments of the market, and has the advantage of being 10-20% less expensive to manufacture.

The price of Chinese P2O5 exports was as low as $2,700/t last September, but has risen subsequently by about $100-200/t due to a hike in coke prices. Strong competition means PWA has been trading at around $1,130-1,160/t P2O5 in the EU. PWA prices generally track around $400-600/t above MGA prices.

Merchant ammonia outlook

Doug Hoadley of Hoadley Consulting stressed the importance of phosphates production as a key driver of the merchant ammonia market. Almost half (45%) of the 18.4 million tonnes of ammonia traded globally in 2015 – around 10 percent of world ammonia production (181.8 million) – was sold to phosphates and NPK producers.

The merchant ammonia market tends to be localised due to high freight costs. Around four-fifths of ammonia trade is intra-regional because of this, explained Hoadley. North African, FSU and European producers mainly sell into the European and North African markets, for example, whereas trade from Canada and Trinidad targets the US market.

Ammonia trade dynamics are changing. US ammonia imports are set to decline by 2-2.5 million short tons over the next couple of years, as new domestic capacity starts to displace imports from Trinidad. Russia is also expanding its merchant ammonia supply over the next three years, and will target the EU market.

Ammonia prices declined to a seven year low of $200/t late last year. The merchant market will remain highly competitive through 2018, in Hoadley’s view, keeping up the pressure on prices.