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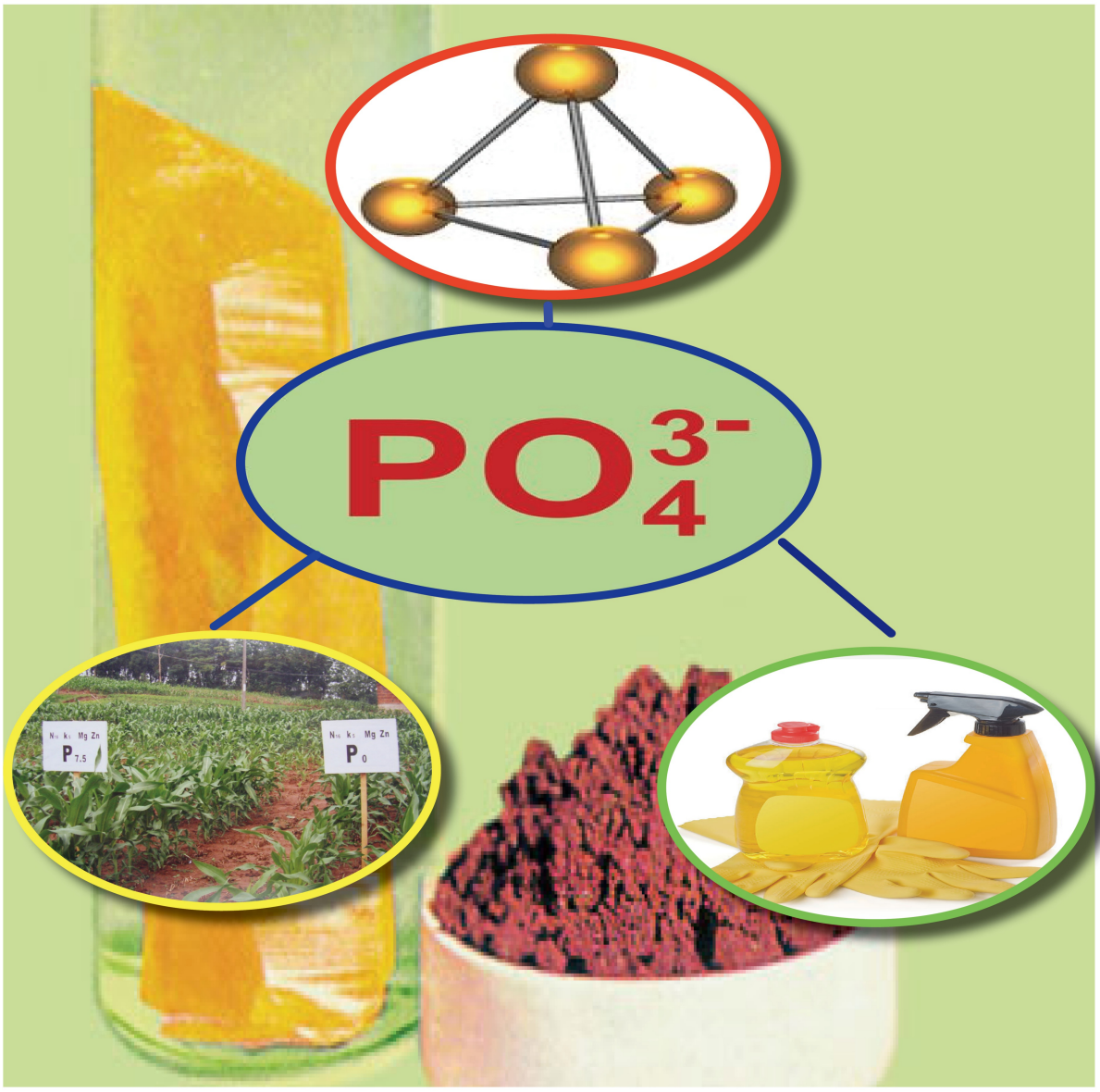

Contents

Headline

The year 2017 is likely to witness decreases of output, demand and export volume in the China's fertiliser industry. The price may go up to some extent. Particularly, the environmental policy will play an important role in the Chinese fertiliser business.

In Jan. 2017, the winter stockpiling for phosphate fertilisers is coming to a close. Phosphate fertiliser prices have increased overall, and it's estimated that the business will be stable before Chinese Spring Festival. However, distributors should be cautious about purchasing and stocking, as downstream demand is likely to decline in the future.

In Jan. 2017, the Union of Agricultural Science and Technology Innovation for China's High-efficacy Compound Fertilisers was jointly set up by Kingenta Group, some scientific research institutions and leading fertiliser enterprises in China.

In Jan. 2017, Lier Chemical's subsidiary Kuaida Agrochemical was approved for listing on the NEEQ. At the same time, Lier Chemical adjusted its 2016 financial forecast because its net profit had exceeded expectations for the year. Additionally, its financial figures should be promising in 2017 given its improved glufosinate ammonium business and Kuaida Agrochemical's recovering profitability.

In late Dec. 2016, Jiangsu Chengxing announced that it had halted its purchase of a 55% stake in Leidatan Hydropower, a decision that will surely hinder the company's development of an integrated ore-electricity-phosphorus supply chain.

In late Dec. 2016, Yuntianhua Group announced that its subsidiary, Yinshan Chemical suspended production due to continuous losses.

In Jan. 2017, the State Council issued the Scheme of Energy-saving and Emission Reduction in the 13th Five-year Plan Period, a move to accelerate industrial transformation and upgrading and promote energy conservation and emission reduction.

On 1 Jan., 2018, the Environment Tax Law will be implemented, which will be conducive to the elimination of outmoded capacity within the chemical industry.

In Dec. 2016, China's yellow phosphorus price stopped rising. The prices in the four main producing areas declined compared with that in late Nov. 2016, and the operating rates also decreased. CCM predicts that the price is likely to remain stable in the short term, considering the rising production costs, decreased supply and reviving demand from downstream industries before the Spring Festival.

In Dec. 2016, China's STPP producers raised their quoted prices, caused by high prices of upstream raw materials. However, CCM believes that the price of STPP will remain stable in the short term, considering the sluggish demand from downstream washing powder and detergent industries.


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Yuntianhua Group
Hainan

Editor's Note

In Jan. 2017, China's phosphorus chemical market kept stable. The prices of phosphorus ore and phosphoric acid remained steady; the overall supply of yellow phosphorus stood low, and the shipment recovered; demand from the phosphate market was positive and the price slightly grew; the price of calcium hydrophosphate dropped.

Market dynamics of phosphorus chemicals in Jan. 2017:

Phosphorus ore: The market remained stable. Some manufacturers stopped mining and the operating rates decreased. The inventories of mining companies were relatively abundant and the downstream operating rates were not high. The overall supply-demand relation kept balanced and the price remained stable.

Yellow phosphorus: The price kept stable and the operating rate was low. The shipment pressure decreased as producers had orders to fulfill.

Phosphoric acid: The business remained stable. Few orders were made and enterprises had no plan to adjust prices.

STPP: The demand was stable, the operating rate was low and the price slightly increased. According to the producers, industrial grade STPP market was sluggish and food grade STPP business showed an upward trend.

MAP: The business was stable. Manufacturers received large volumes of orders, and most of them can schedule the orders till around Chinese Spring Festival (late Jan. 2017). The quotations kept steady, but the actual transaction prices slightly declined by USD7.19–14.39/t (RMB50–100/t).

DAP: The business was stable, and companies were mainly fulfilling their previous low-price orders. The quotations kept high, but the downstream distributors didn't accept it.

The USD/RMB exchange rate in this newsletter is USD1.00=RMB6.9498 on 3 Jan., 2017, sourced from the *People's Bank of China*. All the prices mentioned in this newsletter will include the VAT, unless otherwise specified.

If you would like to cover any specific topics or investigate any covered subjects in more details, please contact us on +86-20- 3761 6606, or econtact@cnchemicals.com.

Market Dynamics

Brief analysis on Chinese fertiliser business in 2017

Summary: The year 2017 is likely to witness decreases of output, demand and export volume in the China's fertiliser industry. The price may go up to some extent. Particularly, the environmental policy will play an important role in the Chinese fertiliser business.

China's fertiliser market was depressed in 2016, and it didn't show any signs of strong rebound until the winter stockpiling for fertiliser in the end of 2016. Recently, some insiders think that the fertiliser business begins to recover from the bottom. "The business in 2017 will be better than that in 2016, and the price can be supported by rising costs," estimated an expert, "However, the whole market will still be relatively weak because it is still in the process of de-capacity."

Overall, there will be five features in the market in 2017:

1. Output to decrease

2. Demand to reduce

3. Export sector to be weak

4. Price to be supported by rising costs

5. Business to be influenced by environmental policies

Specially,

1. Output to decrease

In 2016, China's total fertiliser capacity and output had already reached 131.67 million tonnes and 80.11 million tonnes, respectively, while the demand was just 66.10 million tonnes. Excess production hit 14.01 million tonnes and overcapacity rate reached nearly 50%. In 2017, the overcapacity will still be a severe problem. Considering low fertiliser prices, many enterprises are likely to lower their operating rates. Therefore, the fertiliser production will decline to some degree in 2017.

2. Demand to reduce

Firstly, the sowing area is estimated to decrease in 2017, influenced by low prices of agriculture produce and farmers' low enthusiasm for planting. As a result, there are a large number of uncultivated lands in some regions. Secondly, with the implementation of national zero increase of fertiliser usage, the methods of fertilising are being optimised, including testing soil for formulated fertilising. There is no doubt that decreasing the fertiliser usage amount is an irresistable trend. Thirdly, as the promotion of controlled release fertiliser, some field crops in North China and East China require less fertiliser. In conclusion, the demand for fertiliser may decline while staying at a stable level.

3. Export sector to be weak

With the cancellation of policies favourable to the fertiliser industry, Chinese fertiliser exporters face higher cost. "The production cost is the biggest factor determining the export capabilities of Chinese fertiliser," stated an industry expert, "Given the current

international prices, quite a few China's fertilisers with low competitiveness couldn't find a place in the export market, though the overall export tariff rate decreases in 2017. What's more, the international fertiliser capacity will be increased. In the context, the export volume in 2017 might be reduced by 10% YoY."

4. Price to be supported by rising costs

The rising costs are expected to play a main role in pushing up the fertiliser price in 2017. It's estimated that the average prices in 2017 will be higher by USD14.39–57.56/t (RMB100–400/t) than that in 2016, with the price rises of raw materials, including phosphate ore, sulfur, urea and liquid ammonia, and the increasing costs for transportation fees, coal and electricity.

5. Business to be influenced by environmental policies

As the environmental regulation becomes increasingly stricter, environmental policy is another important factor influencing the fertiliser business in 2017. Under a stricter regulation, the production costs of enterprises increases, which, in turn, may force them to adjust operating rates. Later, the fertiliser production and the demand-supply relationship may be changed.

China's phosphate fertiliser price hovers at high level in Jan. 2017

Summary: In Jan. 2017, the winter stockpiling for phosphate fertilisers is coming to a close. Phosphate fertiliser prices have increased overall, and it's estimated that the business will be stable before Chinese Spring Festival. However, distributors should be cautious about purchasing and stocking, as downstream demand is likely to decline in the future.

As of the middle of Jan. 2017, China's 55% powder monoammonium phosphate prices were about USD280.58–287.78/t (RMB1,950–2,000/t), up by 1.31% MoM; 64% granular diammonium phosphate prices hit USD345.33–359.72/t (RMB2,400–2,500/t), up by 0.99% MoM. Overall, current domestic phosphate fertiliser prices are comparatively high. However, generally speaking, downstream users are not accepting the present high prices, and the enterprises are mainly fulfilling their previous orders and receiving few new ones.

There were three main reasons behind the previous rises in phosphate fertiliser prices:

1. Price rises were stimulated by increases in the cost of raw materials, such as those of coal, phosphorus ore and sulphur. What's more, CIF prices of sulphur kept increasing, caused by the stronger dollar. As Chinese Spring Festival (late Jan. 2017) approaches, it's expected that the supply of phosphorus ore will decrease due to the slowing speed of mining, and as workers gradually begin their holidays.

2. The supply of phosphate fertiliser and raw materials tightened, influenced by rising transportation fees and strained transport capacity close to Chinese Spring Festival.

3. The national operating rate of the industry was down to around 30%, affected by stricter environmental inspections. However, as inspections finished in Hubei Province in late Dec. 2016, some mid- and large-sized enterprises resumed production. Since then, the overall operating rate has gradually recovered to about 49%.

In this context, CCM believes that phosphate fertiliser prices are likely to hover at a high level or slightly increase before Chinese Spring Festival, and that the volume of new orders won't increase greatly.

As to the phosphate fertiliser business trend in Spring (March–May) 2017, demand from downstream markets will play a crucial role. Some insiders believe that downstream demand in 2017 will be less than that in 2016, and that distributors should use caution when purchasing and stocking, for the following reasons:

1. Given the low prices of grain in 2016, many farmers who didn't receive government subsidies suffered losses last year. Most distributors in Northeast China hold the opinion that farmers will change their planting structures or reduce farming area, and cut expenditure on agricultural means of production in the future, consequently lowering demand for phosphate fertiliser.

2. As organic fertiliser, slow/controlled release fertiliser, and formulated fertilising based on soil testing are promoted, the quantity of phosphate fertiliser used is expected to decline.

3. On 22 Dec., 2016, the *Green Development Index System* and the *Evaluation System for Construction of Ecological Civilisation* were jointly issued by the National Development and Reform Commission, the National Bureau of Statistics, the Ministry of Environmental Protection, and the Organisation Department of the CPC Central Committee. According to these two new policies, the "usage amount of fertiliser per unit farming area" will be added as one of the indicators for performance appraisal by the head of party and government. Therefore, it can be expected that local government officials will further attempt to accelerate fertiliser usage reduction.

Imported fertiliser volume largely decreases at Xiamen port in 2016

In early Jan. 2017, the Dongdu Inspection and Quarantine Bureau of Xiamen City, Fujian Province revealed that there were 129 batches of imported fertilisers inspected at the Xiamen port, at a volume of 104,000 thousand tonnes and a value of USD39.68 million. The above three figures were down by 25.4%, 30.0% and 35.2% YoY respectively, and the import volume had declined to the lowest point in the past three years.

Compound fertilisers is the main type of imported fertiliser at this port, accounting for 97.1% of the total. The decrease of imported compound fertilisers in 2016 was the major contributor to the large decline of imported fertiliser at this port. Actually, more and more domestic fertiliser producers have begun manufacturing high-quality fertiliser, as China's technology for fertiliser production increasingly improves in recent years, greatly cutting down the volume of import ones.

Company Dynamics

Kingenta Group leadingly establishes innovation union for compound fertilisers

Summary: In Jan. 2017, the Union of Agricultural Science and Technology Innovation for China's High-efficacy Compound Fertilisers was jointly set up by Kingenta Group, some scientific research institutions and leading fertiliser enterprises in China.

On 6 Jan., 2017, the Union of Agricultural Science and Technology Innovation for China's High-efficacy Compound Fertilisers (the Union) was established in Beijing, a sign that the country's science and technology innovation in the fertiliser industry has entered into a synergetic development stage. The Union was set up to provide science and technology supports for the transformation and upgrading of fertiliser industry and the sustainable development in agriculture, by integrating industry resources and organising a research-production-application innovation platform.

Under the direction of the Science and Technology Education Department and Planting Industry Management Department, Ministry of Agriculture (MOA), the Union is led by Kingenta Ecological Engineering Group Co., Ltd. (Kingenta Group) and allied with combined 30 famous universities, leading fertiliser enterprises and institutes, including China Agricultural University, Shandong Agricultural University, Yuntianhua Group Co., Ltd. and the National Agricultural Technology Promotion Service Centre. In recent years, with "Technology First" as its guiding strategy, Kingenta Group has already established several national research and development (R&D) platforms, and become an important force in agricultural science and technology innovation.

"As a leader of the Union, the company will continue developing and promoting new technology for decreasing usage and increasing efficacy, by sticking to an idea of integration, cooperation, co-creation and sharing," said Wan Lianbu, president of Kingenta Group, "Via innovation, we hope to promote the development of green agriculture and help farmers become richer."

As a large agricultural country, China is an important fertiliser producer and user. However, both resource wastes and environmental disruption have restricted the healthy development of Chinese agriculture, caused by low utilisation rate, over-use and unsuitable use of fertiliser. It's estimated that China loses more than USD14 billion (RMB100 billion) every year due to fertiliser losses. In 2015, the MOA put forward that the fertiliser usage amount should realise a zero increase in China by 2020. In the context, the Union is expected to play an important role in speeding up the R&D and promotion of high-efficacy compound fertilisers, and realising the goal for reducing fertiliser usage amount and improving efficacy.

Reportedly, there are three key issues for the Union:

1. Organise a research-production-application innovation platform and strive to technology breakthrough in high-efficacy compound fertilisers.

2. Promote new technology of high-efficacy fertilising methods specified for various crops in different regions.

3. Provide comprehensive solution schemes for the crop farming sector by concentrating on new types of fertiliser and advanced technology.

In addition, the Union will suitably launch some projects on soil remediation, including setting up soil remediation fund and building 100+ model counties in soil restoration and improvement of cultivated land quality.

Lier Chemical: 2017 performance looks promising

Summary: In Jan. 2017, Lier Chemical's subsidiary Kuaida Agrochemical was approved for listing on the NEEQ. At the same time, Lier Chemical adjusted its 2016 financial forecast because its net profit had exceeded expectations for the year. Additionally, its financial figures should be promising in 2017 given its improved glufosinate ammonium business and Kuaida Agrochemical's recovering profitability.

On 4 Jan., 2017, Lier Chemical Co., Ltd. (Lier Chemical) announced that its subsidiary Jiangsu Kuaida Agrochemical Co., Ltd. (Kuaida Agrochemical) had been approved for listing on the National Equities Exchange and Quotations (NEEQ).

On the same day, Lier Chemical released its adjusted 2016 financial forecast, stating that the YoY change range of net profit had been corrected to 35%–55%, or USD26.89 million –30.88 million (RMB186.91 million –214.60 million). The company expressed that it had adjusted the forecast mainly because its sales of some products in Q4 had exceeded expectations. In detail, many local

governments carried out stricter environmental policies in Q4, causing quite a few enterprises to limit or even suspend production, including some glufosinate ammonium producers in Hebei Province. As a result, the market share of Lier Chemical increased significantly.

Reportedly, Lier Chemical has the largest chloropyridine herbicide R&D and production base and is the largest glufosinate ammonium manufacturer in China. It is mainly engaged in the R&D, production and sale of efficient and safe pesticides, such as chloropyridine pesticides and organophosphorus pesticides. What's more, it holds a 51% share in its subsidiary, Kuaida Agrochemical, which is involved in 50+ kinds of pesticides (covering herbicides, insecticides and fungicides).

CCM believes that Lier Chemical will witness a large rise in its financial performance in 2017, reasons for which are as follows:

1. The glufosinate ammonium business is expected to become significantly more profitable.

- Demand side: There are three most frequently-used herbicides–glyphosate, paraquat and glufosinate ammonium. Since 1 July, 2016, paraquat has been banned in China due to its strong toxicity. Therefore, much of paraquat's market share will be ceded to glyphosate and glufosinate ammonium.

- Supply side: There is no sign that glufosinate ammonium output will increase in 2017, given the high technological barrier to production, lack of advanced domestic producers, and increasingly severe environmental policies.

- Price: Quotations rose from USD17.27 thousand/t (120 thousand/t) in Nov. 2016 to USD25.18 thousand/t (RMB175 thousand/t) in early Jan. 2017, stimulated by the increasing gap between demand and supply. What's more, many industry insiders predict that the existing supply shortage won't be eased in 2017, thus the price is likely to remain high.

- Capacity: The company will enlarge its glufosinate ammonium capacity from 3,000 t/a currently to 5,000 t/a.

2. Its subsidiary Kuaida Agrochemical is likely to perform well financially, as the company's relocation is coming to a close. In fact, Kuaida Agrochemical's profitability has been negatively influenced since it began relocating in 2012. The move has almost been fully completed and its revenue and profitability have returned to their upward trajectories.

Jiangsu Chengxing stops purchase of Leidatan Hydropower

Summary: In late Dec. 2016, Jiangsu Chengxing announced that it had halted its purchase of a 55% stake in Leidatan Hydropower, a decision that will surely hinder the company's development of an integrated ore-electricity-phosphorus supply chain.

On 29 Dec., 2016, Jiangsu Chengxing Phosph-Chemicals Co., Ltd. (Jiangsu Chengxing) announced an end to its plan to acquire shares in Yunnan Mile Leidatan Hydropower Co., Ltd. (Leidatan Hydropower). Previously, on 7 Dec. 2015, Jiangsu Chengxing stated that it intended to purchase a 55% stake in Leidatan Hydropower. However, an investigation into Jiangsu Chengxing by the China Securities Regulatory Commission (CSRC) has yet to be concluded, and the deadline for a decision on the purchase, which was agreed at the fourth extraordinary shareholders meeting on 23 Dec., 2015, expired on 22 Dec., 2016.

According to the earlier announcement, Jiangsu Chengxing had planned to buy a 55% stake in Leidatan Hydropower held by Jiangyin Chengxing Industrial Group Co., Ltd. (Jiangyin Chengxing) with its own funds. Checking and approval of the transaction by the Merger and Acquisition of CSRS was required because according to the *Measures for Administration of Major Asset*

Restructuring of Listed Companies it was a backdoor listing. The assessment report revealed that the estimated value of a 100% stake in Leidatan Hydropower, evaluated on the basis of its assets, was USD88.06 million (RMB612 million), putting the price of a 55% stake at USD48.35 million (RMB336 million). Jiangsu Chengxing believed that the assets it planned to acquire would play an important role in the company's integrated ore-electricity-phosphorus supply chain, as it followed the development trend of the phosphorus chemical industry and was conducive to the company's realisation of chain development.

However, both Jiangsu Chengxing and Jiangyin Chengxing were later investigated by the CSRC due to Jiangsu Chengxing's failure to disclose information and Jiangyin Chengxing's suspected violation of laws and regulations. The investigations are still under way, and therefore, Jiangsu Chengxing has had no other choice but to halt the restructuring.

Notably, this is Jiangsu Chengxing second failed attempt to purchase shares in Leidatan Hydropower. As early as 19 Dec., 2009, the company released a private placement plan, intending to raise money for the purchase of a 55% stake in Leidatan Hydropower, a deal then estimated to cost USD35.97 million (RMB250 million). This proposal was approved at a shareholders' meeting on 5 Jan., 2010, with the deal to be finalised within a year. However, on 9 Dec., 2010, Jiangsu Chengxing announced the termination of the private placement. The board of directors withdrew the relevant application documents after considering the big changes that the company had witnessed since the beginning of the year.

Yuntianhua: Yinshan Chemical suspends production due to losses

Summary: In late Dec. 2016, Yuntianhua Group announced that its subsidiary, Yinshan Chemical suspended production due to continuous losses.

On 24 Dec., 2016, Yuntianhua Group Co., Ltd. (Yuntianhua Group) announced that its subsidiary, Yunnan Yuntianhua International Yinshan Chemical Co., Ltd. (Yinshan Chemical) suspended production, a move to avoid exacerbating losses due to decreasing fertiliser prices.

Yinshan Chemical was founded in March 2008, with a registered capital of USD7.77 million (RMB54 million), USD5.21 million (RMB36.18 million), or 67% of which was funded by Yuntianhua Group. Yinshan Chemical is mainly engaged in producing calcium superphosphate and sulfuric acid, with each capacity reaching 200,000 t/a and 100,000 t/a respectively. Besides the equipment for producing calcium superphosphate, Yinshan Chemical invested USD29.79 million (RMB207 million) in constructing a 100,000 t/a "circular economy project of comprehensive utilisation of sulfur tailings", according to Yuntianhua Group. At that time, the subsidiary estimated that it would provide 300,000 t/a calcium superphosphate and compounded fertilisers for the Dianxi region, Yunnan Province and Burma and North India markets when the project is put into full operation.

However, the actual operation went badly. The Group reported that Yinshan Chemical suffered a loss of nearly USD4.01 million (RMB27.85 million) in 2015, and it will be hurt more if continues production given the declining calcium superphosphate prices in 2016, so suspending production will be helpful to reduce losses.

In 2016, China's fertiliser industry was sluggish, affected by the pressures from export tariff rate, logistic costs and environmental protection. In the context, many domestic producers were suffering losses. Fundamentally, overcapacity is the primary reason. The producing suspension of Yinshan Chemical is an epitome of the depressed fertiliser industry in 2016 and a reflection of de-capacity in the industry.

Some industry insiders analyses that there were three main reasons for the depressed fertiliser industry:

1. The export tariff rate in 2016 was higher than that in 2015, causing higher export costs and less competitive prices for domestic enterprises.

2. The transportation fees went up due to adjustment for fertiliser transporting fares across the country.

3. The environmental pressure increased a lot caused by governments' intensifying environmental policies, which forced many manufacturers limit, or even suspend production.

Besides, both the decreasing prices of international agriculture produces and the supply-demand relationship played roles in the large decrease of export volume in 2016, with the figure down by about 20% YoY. Additionally, the overcapacity is aggravating, as the capacities are continuously released at home and abroad. Meanwhile, the market competition gets intensified, with more and more foreign fertiliser giants entering into Chinese market. Influenced by it, the sales volume and average prices of Yuntianhua Group's main products decreased YoY, resulting in a remarkable decline in its sales margin.

Political Factors

Scheme of Energy-saving and Emission Reduction in 13th Five-year Plan Period introduced

Summary: In Jan. 2017, the State Council issued the *Scheme of Energy-saving and Emission Reduction in the 13th Five-year Plan Period*, a move to accelerate industrial transformation and upgrading and promote energy conservation and emission reduction.

On 5 Jan., 2017, the State Council issued the *Scheme of Energy-saving and Emission Reduction in the 13th Five-year Plan Period* (the Scheme). In this scheme, the major objectives, key assignments and specific measures for the energy saving and emission reduction are illustrated, which is expected to make big impacts on the future development of the fertiliser and pesticide industries.

According to the Scheme, no new capacity projects can be approved in the severe overcapacity industries, no matter what the forms and ways are. Access administration and energy-saving examination should be strictly carried out. In those severe overcapacity industries, such as electricity, chemical and coal, the enterprises that produce or use outmoded products or fail to meet standards for environmental protection, energy consumption and safety, are required to exit the market at suitable time according to laws and regulations.

By 2020, the national energy consumption per RMB10,000 (USD1438.89) GDP should be decreased by 15% compared with 2015, and the total energy consumption should be less than 5 billion tonnes of standard coal. The total discharge amounts of sulfur dioxide and oxynitride need to be within 15.80 million tonnes and 15.74 million tonnes, down by 15% and 15% compared with 2015; and the volatile organic compound emissions amount should be declined by more than 10% compared with 2015.

What's more, China will make great efforts to promote the resource-conserving agriculture technologies and clean agricultural production. Specifically,

-Promote the collection processing and utilisation of faeces in the livestock and poultry farms

-Encourage the construction of treatment facilities for organic waste, such as straw and faeces

-Advocate the increase of organic fertiliser and fertilising technology by testing soil

-Carry out prevention and control for crop diseases and pests

-Promote the use of high-efficacy, low toxicity and low-residue pesticides

By 2020, the usage amounts of both fertilisers and pesticides applied in the main crops should achieve zero increases, and the utilisation rate of fertiliser should increase to more than 40%. Notably, the objectives should be realised by 2019 in the Beijing-Tianjin-Hebei, Yangtze River Delta and Pearl River Delta regions.

In regards to the fertiliser industry, the polluting waste gas, waste liquid and waste residue discharged during the production process will be supervised by the environmental protection departments. If an enterprises fails to meet the standards for environmental protection, its operating rates will be negatively affected. When such situation lasts, the enterprise must suffer heavy losses in operation and is likely to be eliminated by the market.

Under the background of national environmental regulation, the fertiliser industry should optimise industrial structure, reduce energy consumption and promote product upgrading. Some leading enterprises are encouraged to extend their developments in the ecological fertiliser sectors. For example, humic acid fertiliser is an effective one, which is able to improve fertiliser efficacy and reduce the fertiliser usage amount. In additional, the production technique and equipment need to be advanced and pollutant discharges decreased. Also, the industry should speed up its pace of eliminating outmoded capacities. Besides, via enlarging investment in science and technology, enterprises can extend their supply chains, strengthen the utilisation of waste (such as phosphogypsum), increase the resource utilisation rates and the added value of products, so as to meet required environment standards and release profits.

Environmental Tax Law to be implemented in 2018

Summary: On 1 Jan., 2018, the *Environment Tax Law* will be implemented, which will be conducive to the elimination of outmoded capacity within the chemical industry.

On 25 Dec., 2016, the *Environment Tax Law of the People's Republic of China* (the *Environment Tax Law*) was approved at the 25th session of the 12th National People's Congress Standing Committee, and will come into force on 1 Jan., 2018. Taxable pollutants, taxpayers, amount of tax payable, and exemption scope are all explicitly stipulated in the new law.

At present, a pollutant discharge fee system, originally established in 1979, is in use in China. Discharge fees for air pollutants, water pollutants, solid waste and noise pollution are collected under this system, which plays an important role in preventing and controlling environmental pollution. To ensure a smooth transition from the existing discharge fee system to the new system of environmental tax, taxable items, taxation basis and tax amount standards will be set according to the current discharge fee system standards, and those eligible for environmental tax will be the same as those who were eligible for discharge fees.

There are two key differences between the present discharge fee system and the new environmental tax law:

1. Another tax break for enterprises is offered under the new law. Under the current discharge fee system, there is only one tax break available for enterprises who make emission reductions: if concentrations of taxable air and water pollutants discharged are below 50% of regulatory standards, the environmental tax is reduced by 50%. In order to encourage companies to cut pollution discharge, the new law stipulates that the environmental tax can be reduced by 75% if concentrations of taxable air and water pollutants discharged are lower than 30% of regulatory standards.

2. The new law further standardises collection and management procedures for environmental tax. Currently, discharge fees are collected and managed by environmental authorities, but after discharge fees are replaced by environmental tax, tax authorities will be responsible for collection. There is no doubt that the law will be more heavily enforced and standardised when tax collection is in accordance with the *Environmental Tax Law* and the *Tax Collection and Administration Law*. In addition, the new law also emphasises cooperation and sharing of information between environmental departments and tax authorities, considering the high level of professionality involved when collecting and managing environmental tax.

Following its implementation on 1 Jan., 2018, the law will facilitate environmental protection through tax collection, requiring high-polluting enterprises to pay higher taxes while offering tax benefits to low-polluting companies. Reportedly, tax revenue is estimated to rocket after environmental tax collection begins, with the total figure thought to reach USD7.19 billion (RMB50 billion).

The introduction of this law is expected to bring big changes in how environmental protection is regulated, and should also accelerate the pace of pollution control. Firstly, stricter tax collection and management allows for tighter enforcement of the law, decreases local government intervention, and solves the problem of enterprises accumulating discharge fee arrears. Secondly, the law also offers tax breaks for those who reduce pollutant emissions. This incentivised measure encourages high-polluting and high-energy-consuming enterprises to improve technology, make transformations and improvements, and speed up the elimination of outmoded capacity.

Additionally, the introduction and implementation of the Environmental Tax Law is expected to boost the development of the new energy industry and environmental protection equipment sector.

Some railway stations for good loading stop in Jan. 2017

In early Jan. 2017, several railways administrations, including that of Kunming City (Yunnan Province), Shenyang City (Liaoning Province) and Chengdu City (Sichuan Province), announced in succession that goods loadings in some railways would be limited or stopped in Jan. 2017, fertiliser involved.

According to the announcement, concentrated arrival of goods is the main reason for the stop of fertiliser loading, but the period won't last long. Most railways for fertiliser would be suspended till H1 Jan. 2017, such as the Luliang Railway Station of Kunming Railway Bureau; some will last for the whole Jan., like the Chaigang Railway Station of Shenyang Railway Bureau; a few will last till 31 March, 2017, such as the Qianjiang Railway Station of Chengdu Railway Bureau.

Notably, few major railway stations for fertiliser are limited or stopped.

Phosphate fertiliser listed in 2017 national supervision and inspection plan for product quality

On 30 Dec., 2016, the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China (AQSIQ) issued the *National Supervision and Inspection Plan for Product Quality in 2017*. A total of 147 kinds of products are mentioned in this plan, including daily products, textiles, electronic and electrical products and agricultural means of production. Of the agricultural means of production, phosphate fertiliser, potassium fertiliser and compound fertilisers are listed.

What's more, the inspected objects cover production enterprises, distribution companies and network marketing companies. The quality inspection results are open to the whole society and those enterprises violating related laws and regulations will be punished. Besides checking the 147 types of products as planned, the AQSIQ will also organise some special supervision and inspection activities for other products.

Technology

China's value-added fertiliser stepping into industrialisation stage

On 13 Jan., 2017, the 2016 Annual Meeting of Value-added Fertiliser Industrial Technology Innovation Union was held in Beijing. It was revealed that the member amount has reached 42, and some enterprises, including Yunnan Yuntianhua Co., Ltd. and Hubei Yihua Chemical Industry Co., Ltd. have begun producing the value-added fertiliser. What's more, three industrial standards, including the *Urea Containing Humic Acid*, have been introduced and will come into effect from 1 April, 2017 onwards, which means that China is stepping into the industrialisation stage for value-added fertiliser. In addition, "developing value-added fertiliser" has been listed as a way into the guiding opinions for promoting transformation and upgrading in the fertiliser industry by the Ministry of Industry and Information Technology of the People's Republic of China.

"In 2017, the union will mainly promote the research and development for new types of synergistic agent, and try to complete the formulation of industrial standards, including the *Ammonium Phosphate Containing Humic Acid* and the *Ammonium Phosphate Containing Alginic Acid*," stated Zhao Bingqiang, secretary general of the union, "We hope the capacity of value-added fertiliser can reach 20 million tonnes per year and the output 2 million tonnes."

Norsterra’s nitrogen-phosphorus synergistic technology enters into China

On 9 Jan., 2016, the brand conference of Norsterra was held in Weng'an County, Guizhou Province. Notably, it is the first time for Norway's nitrogen-phosphorus synergistic technology to enter into China, with the assistance of Norsterra (China) Chemical Co., Ltd.

With technology supports by Norwegian University of Life Sciences and other European science research institutions, Norsterra achieved great progress in advancing nitrogen-phosphorus synergistic technology, by making research in the high-end economic crops planting areas and featured agriculture planting regions. In fact, Norsterra has paid much attention to the Chinese market (the largest agriculture market in the globe) since 2014, with its production base relied on Kingenta Ecological Engineering Group Co., Ltd. To date, the first phase of the project has been completed and put into production.

Kunming University of Science and Technology establishes innovative team for fine phosphorus chemical

In early Jan. 2017, Kunming (Yunnan Province) University of Science and Technology, relying on its advantage in phosphorus chemical field, established an innovative team for fine phosphorous chemical technology of Yunnan, following approval of the Science and Technology Department of Yunnan Province.

The team will focus on the research of energy saving and emission reduction in the phosphorus chemical industry, phosphorus flame-resistant materials, phosphorus electronic materials and phosphorus catalytic materials. It aims to provide constant talent and technology supports to the development of Yunnan phosphorus chemical industry, to make contribution to the upgrading and structural adjustment of Yunnan phosphorus chemical, to provide support for the construction of chemical engineering discipline, and to maintain Yunnan's leading position in phosphorus chemical sector.

Market Data Analysis

China's yellow phosphorus price fell in Dec. 2016

Summary: In Dec. 2016, China's yellow phosphorus price stopped rising. The prices in the four main producing areas declined compared with that in late Nov. 2016, and the operating rates also decreased. CCM predicts that the price is likely to remain stable in the short term, considering the rising production costs, decreased supply and reviving demand from downstream industries before the Spring Festival.

In Dec. 2016, China's yellow phosphorus price went down from a high point, and the prices in main producing areas showed downward trends compared with that in late Nov. Specifically,

- Yunnan Province

Ex-works price hit 2,088USD/t, down by 1.46% MoM and up by 11.60% YoY.

The yellow phosphorus sale was flat. The overall operating rates largely declined, so the supply in the future will be relatively low. What's more, the cost pressure for enterprises was intense, caused by consecutively rising electricity prices in the past three months. The cost for electricity went up by about USD0.0230/kw (RMB0.16/kw) over that in late Oct, and it is estimated that the electricity cost will increase by USD0.0029–0.0043/kw (RMB0.02–0.03/kw) after Jan. 2017.

- Sichuan Province

Ex-works price reached USD2,082/t, up by 0.24% MoM and up by 7.37% YoY.

The sale was poor and the overall operating rate declined slightly. In the downstream market, the demand was weak, and phosphoric acid and phosphate producers maintained low operating rates, affected by environmental inspections. What's more, the yellow phosphorus buyers from other provinces also decreased.

- Guizhou Province

Ex-works price achieved USD2,091/t, down by 2.24% MoM and up by 10.81% YoY.

The operating rates were stable and the sale performed well. Some manufacturers expressed that the supply was a little intense,

but the producers won't adjust their production before the Spring Festival (in late Jan. 2017), despite the rising electricity prices in Jan. 2017.

- Hubei Province

Ex-works price was USD2,211/t, down by 1.29% MoM and up by 10.61% YoY.

Impacted by the environmental inspections and high costs, all local producers suspended production, except that Hubei Xingfa Chemicals Group Co., Ltd. manufactured a few products. Actually, there wasn't yellow phosphorus sold to other areas, and local enterprises that need the product mainly purchased from Yunnan and Guizhou provinces.

CCM predicts that the price of yellow phosphorus will remain steady in the short term for the following reasons:

1. Many downstream companies are likely to purchase some yellow phosphorus for stock before the Spring Festival, so the market is expected to become more active in the coming period.

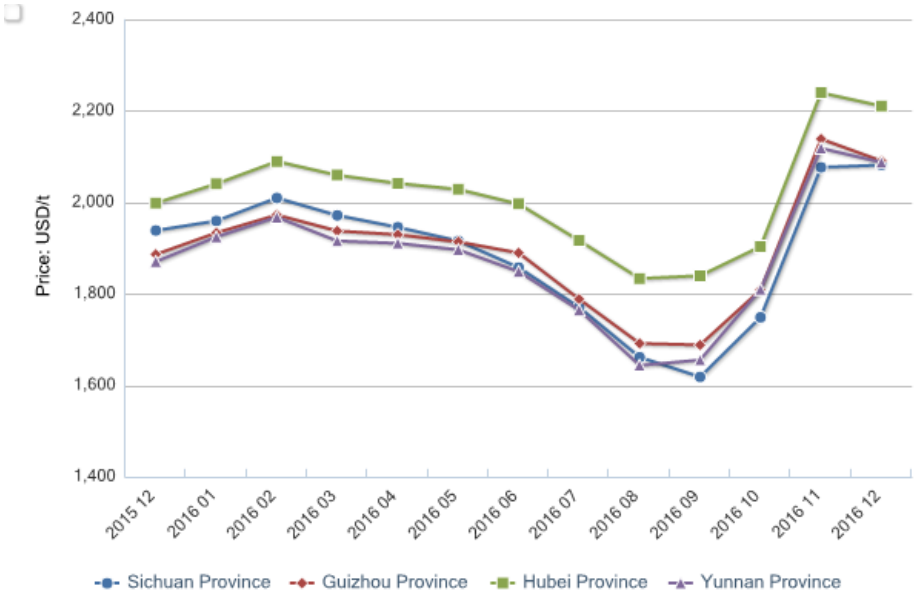
2. Recently the operating rates in the yellow phosphorus market have fallen to about 30%, influenced by the environmental inspections. As a result, the supply will decrease.

3. The production cost of some enterprises is likely to rise because the electricity prices in Yunnan and Guizhou provinces will increase by some degree.

All the above three factors are able to support the price of yellow phosphorus.

However, there is a possibility that the price may decline after the Spring Festival, just like the past two years, considering the fast rise in the previous period.

Figure 1: Ex-works price of yellow phosphorus in China, Dec. 2015-Dec. 2016



Source: CCM & China Customs

China's STPP price rises in Dec. 2016

Summary: In Dec. 2016, China's STPP producers raised their quoted prices, caused by high prices of upstream raw materials. However, CCM believes that the price of STPP will remain stable in the short term, considering the sluggish demand from downstream washing powder and detergent industries.

In Dec. 2016, China's sodium tripolyphosphate (STPP) producers remained low operating rates due to environmental inspections. They raised their quoted prices, caused by high prices of the upstream yellow phosphorus and sodium carbonate. For example, the price of sodium carbonate in Hubei Province reached around USD302.17/t (RMB2,100/t). However, the overall market was depressed. Most manufacturers mainly fulfilled orders of regular clients and received few new orders.

-Industrial grade STPP

Many manufacturers tentatively raised their quoted prices, driven by the increasing prices of upstream yellow phosphorus and sodium carbonate and the lower operating rates in the country caused by environmental inspections. However, it was hard for the downstream enterprises to accept the high STPP prices. What's more, prices of those products using glyphosate by-products as raw materials were lower. For instance, the ex-works price of STPP using by-products as materials in Sichuan Province was less than USD719.45/t (RMB5,000/t), but the STPP of Chongqing Chuandong Chemical (Group) Co., Ltd. reached USD834.56/t (RMB5,800/t). Usually, clients were inclined to the lower-price products.

- Food grade STPP

The enterprises expressed that the sales in the export business was depressed, the performance in the domestic market was also worse than before, and they mainly fulfilled previous orders. At present, the producers are maintaining low operating rates and will suspend production in advance in Jan. 2017.

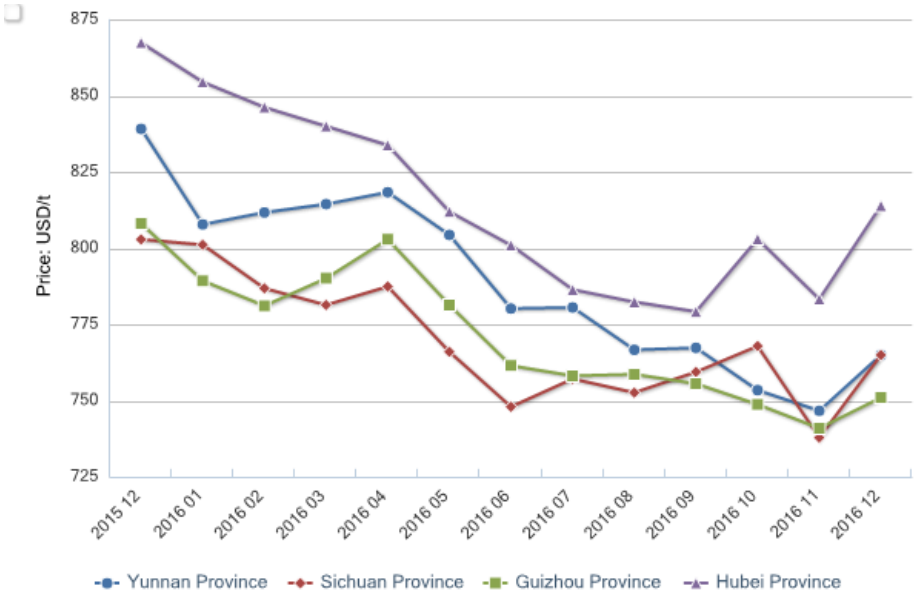
According to CCM's price monitoring, China's CIF and FOB prices of 94% industrial grade STPP were USD820.17–863.33/t(RMB5,700–6,000/t) and USD770–890/t respectively; the prices of 94% food grade STPP were USD906.50–964.06/t (RMB6,300–6,700/t) in Dec. 2016.

CCM predicts that China's STPP market will keep steady before Chinese Spring Festival (late Jan. 2017), mainly because:

1. The price of STPP is not likely to decrease, due to the increased prices of raw material yellow phosphorus and sodium carbonate and the lowering operating rates.

2. Demand from downstream industries such as washing powder and detergent industries largely declined, impacted by stricter environmental policies. Most downstream enterprises just purchase STPP according to their demand and stock few quantities. In this circumstance, the oversupply will fundamentally restrict the price rise of STPP.

Figure 2: Ex-works price of industrial grade sodium tripolyphosphate in China, Dec. 2015-Dec. 2016



Source: CCM & China Customs

Import & Export

International trade of phosphate chemicals in Nov. 2016

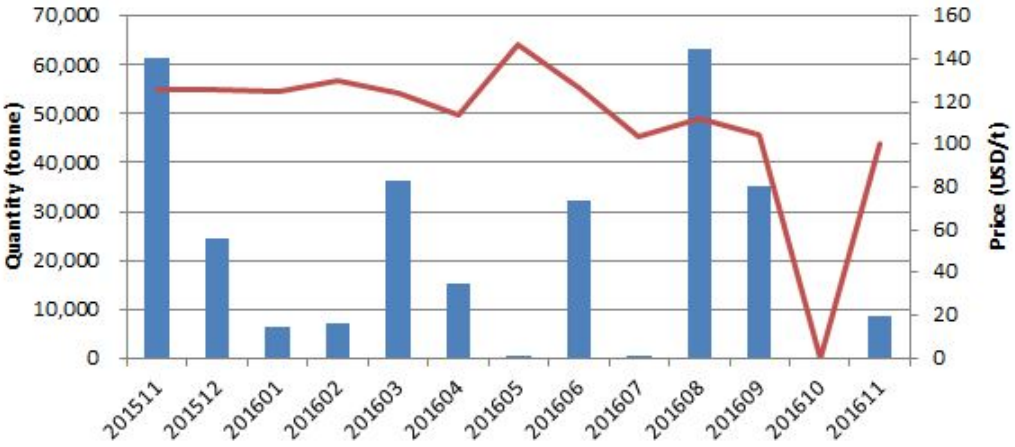
Table 1: China's exports of variations of staple phosphorus chemicals, Nov. 2016

Chemicals	Export volume, tonne	YoY Change	MoM change	Export price, USD/t	YoY change	MoM change
Phosphorus ore	8,406.00	-86.35%	/	100.00	-20.46%	/
Yellow phosphorus	1,446.40	+233.12%	+4.54%	2.73	-26.61%	+2.63%
Food grade PA	72,020.42	+21.43%	+46.15%	631.09	-11.12%	-1.79%
TSP	66,650.32	+8.21%	+17.81%	248.61	-26.84%	+0.97%
MAP	267,415.46	+31.66%	-6.06%	294.13	-29.28%	+1.04%
DAP	880,076.02	+5.56%	+1.13%	320.04	-29.15%	-0.88%
P_2O_5	1,706.30	+19.07%	+84.22%	1,420.40	-13.90%	-1.42%
$POCl_3$	445.37	+68.61%	+0.57%	1,635.47	+43.71%	+36.56%
STPP	17,483.98	-16.70%	+63.95%	695.46	-10.47%	-1.93%

Note: The price unit of yellow phosphorus is USD/kg.

Source: CCM & China Customs

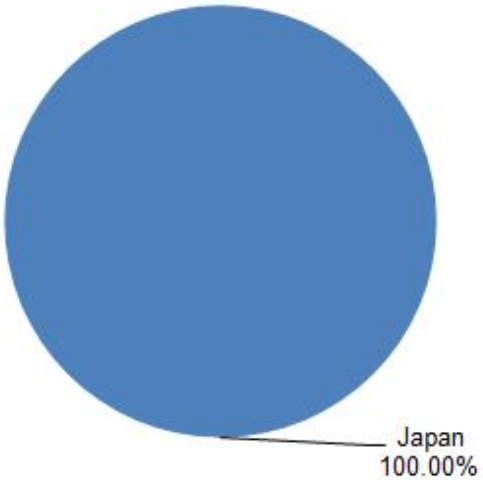
Figure 3: China's exports of phosphorus ore by month, Nov. 2015 - Nov. 2016



Note: Export volume in May 2016 was 20.00 tonnes. Export volume in July 2016 was 438.25 tonnes. Export volume in Oct. 2016 was 0 tonne.

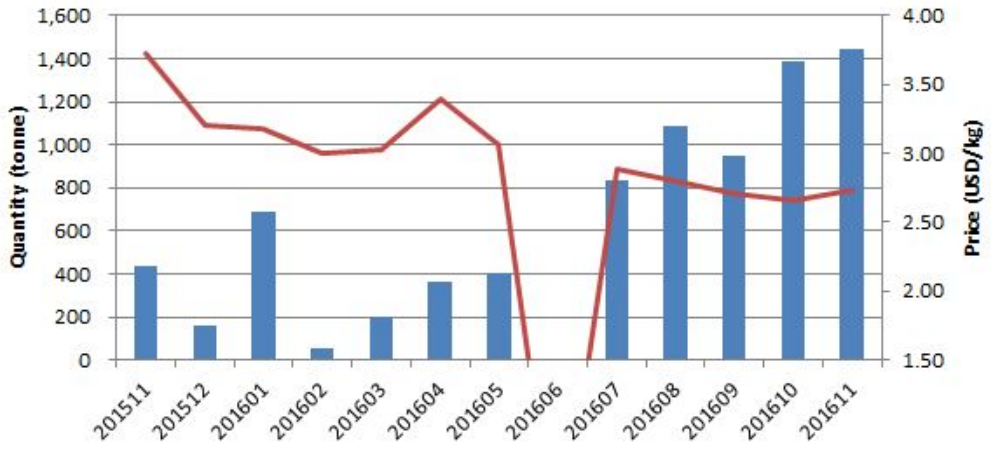
Source: CCM & China Customs

Figure 4: China's export destinations of phosphorus ore, Nov. 2016



Source: CCM & China Customs

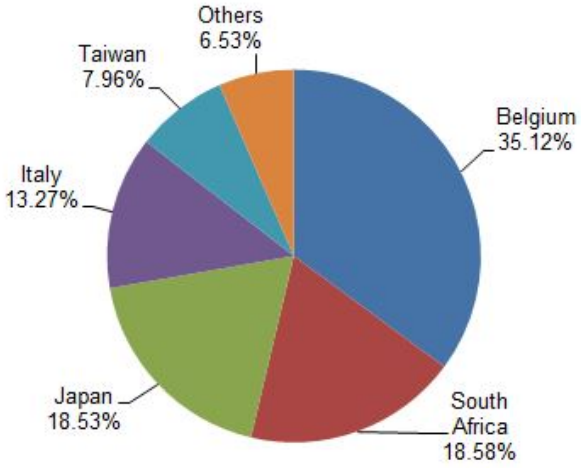
Figure 5: China's exports of yellow phosphorus by month, Nov. 2015 - Nov. 2016



Note: Export volume in June 2016 was 0 tonne.

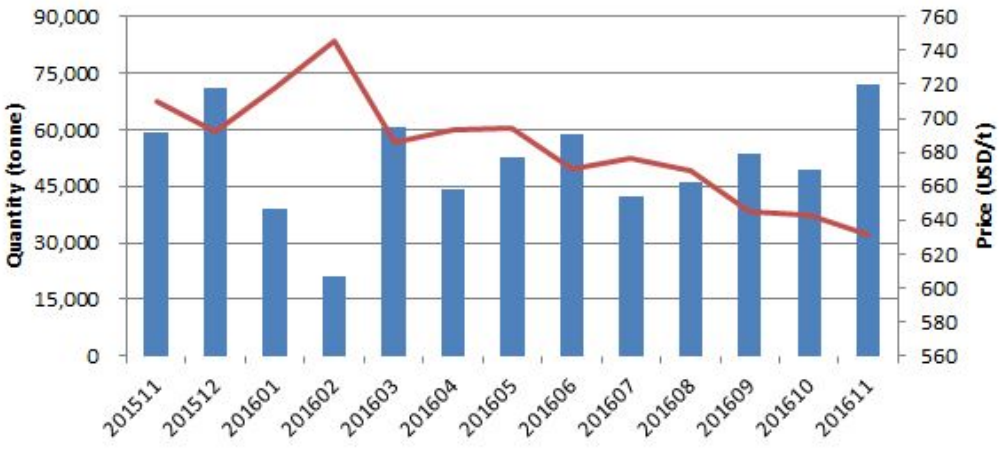
Source: CCM & China Customs

Figure 6: China's export destinations of yellow phosphorus, Nov. 2016



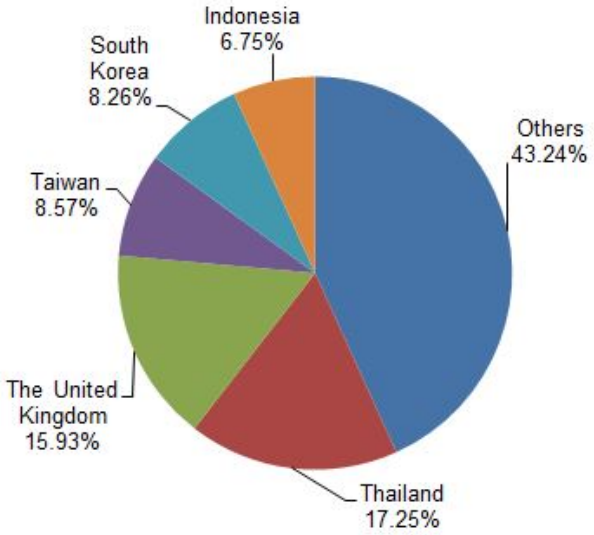
Source: CCM & China Customs

Figure 7: China's exports of food-grade phosphoric acid by month, Nov. 2015 - Nov. 2016



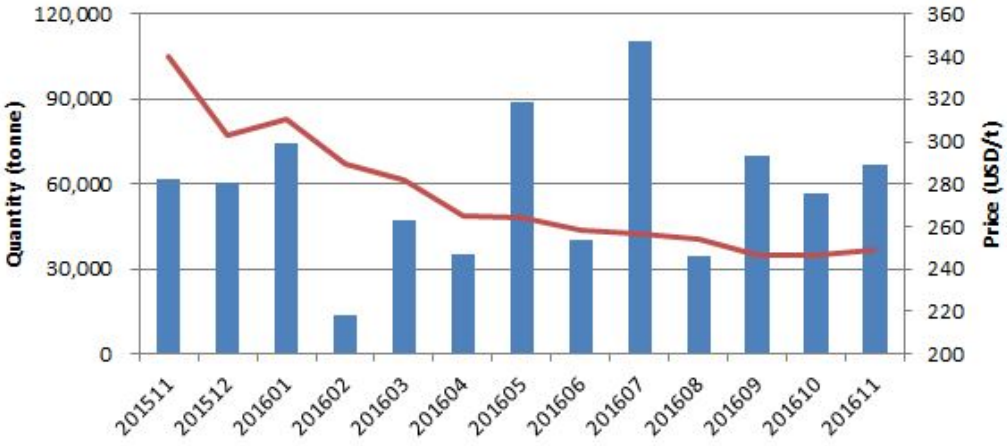
Source: CCM & China Customs

Figure 8: China's export destinations of food-grade phosphoric acid, Nov. 2016



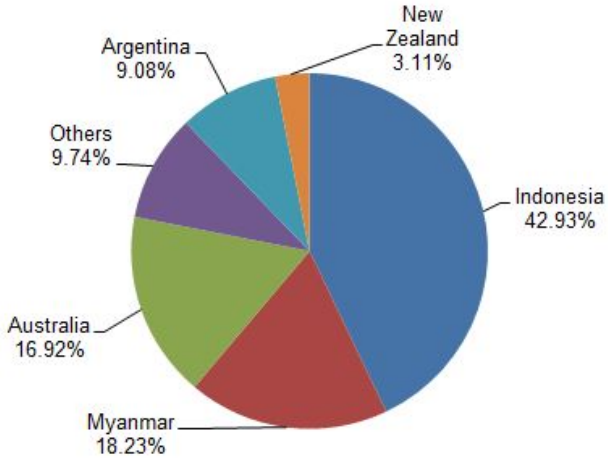
Source: CCM & China Customs

Figure 9: China's exports of TSP by month, Nov. 2015 - Nov. 2016



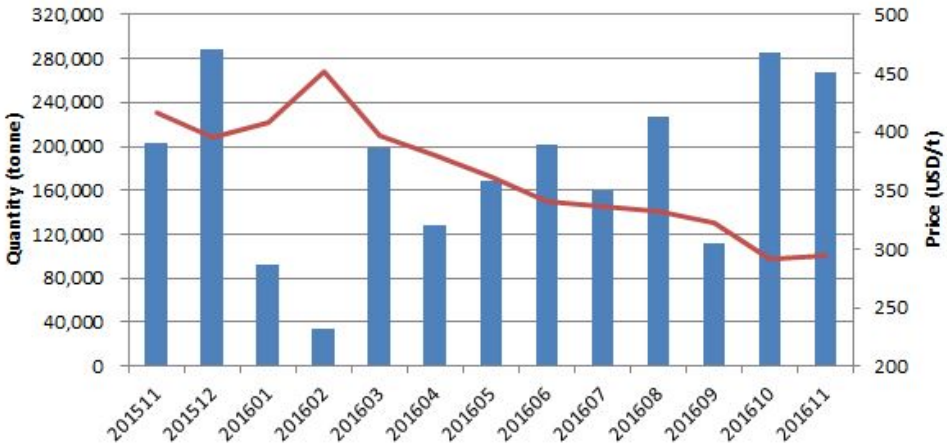
Source: CCM & China Customs

Figure 10: China's export destinations of TSP, Nov. 2016



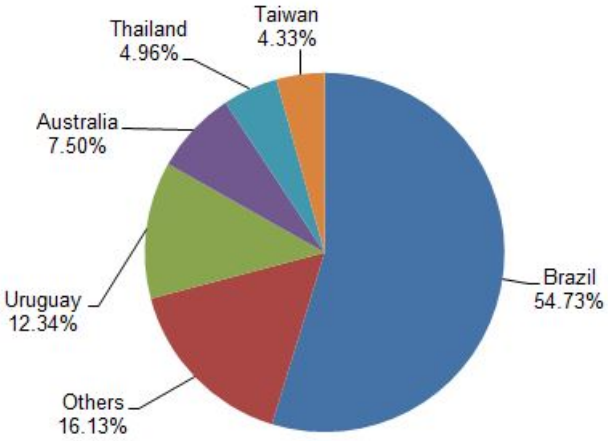
Source: CCM & China Customs

Figure 11: China's exports of MAP by month, Nov. 2015 - Nov. 2016



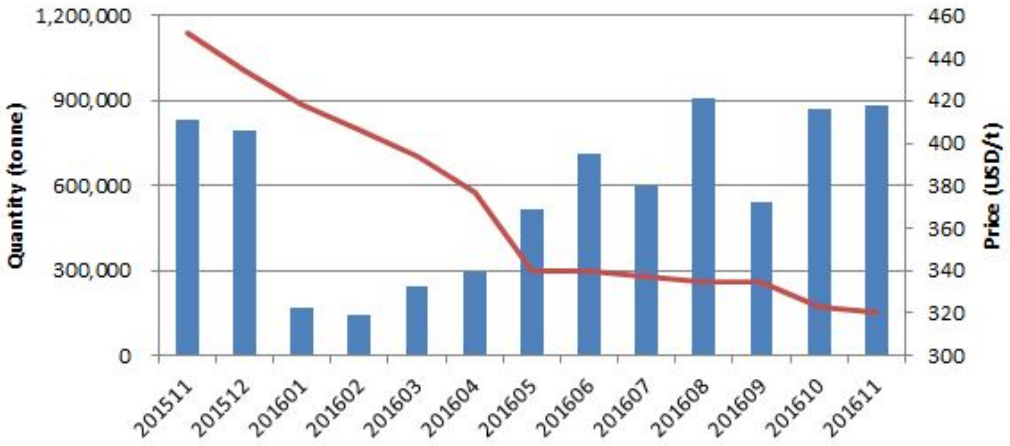
Source: CCM & China Customs

Figure 12: China's export destinations of MAP, Nov. 2016



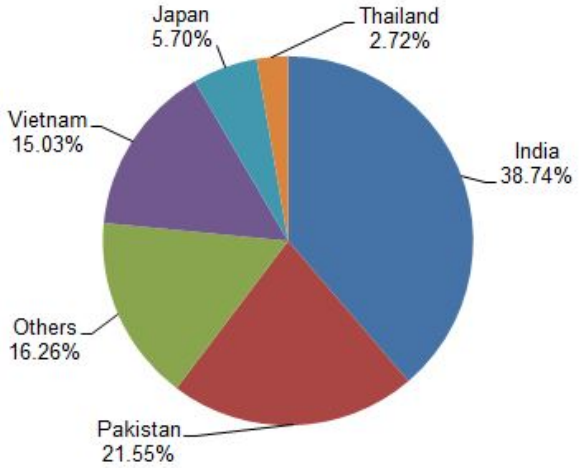
Source: CCM & China Customs

Figure 13: China's exports of DAP by month, Nov. 2015 - Nov. 2016



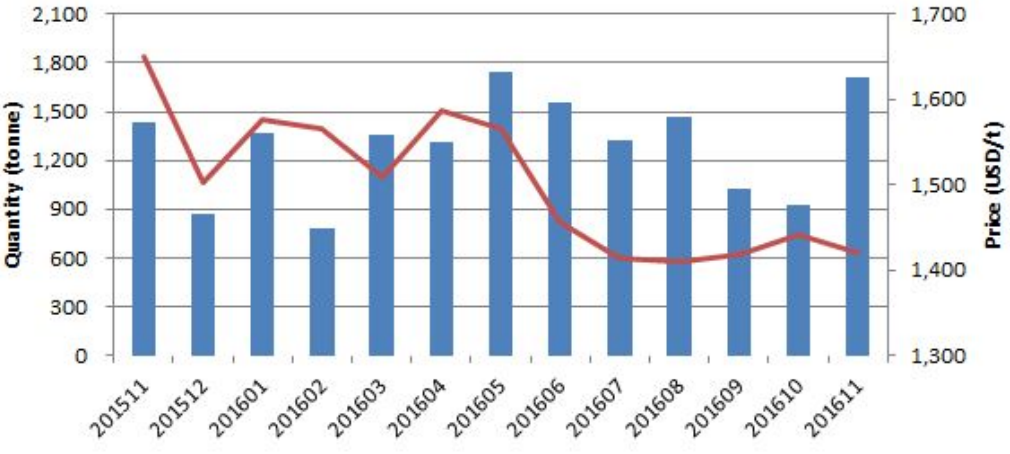
Source: CCM & China Customs

Figure 14: China's export destinations of DAP, Nov. 2016



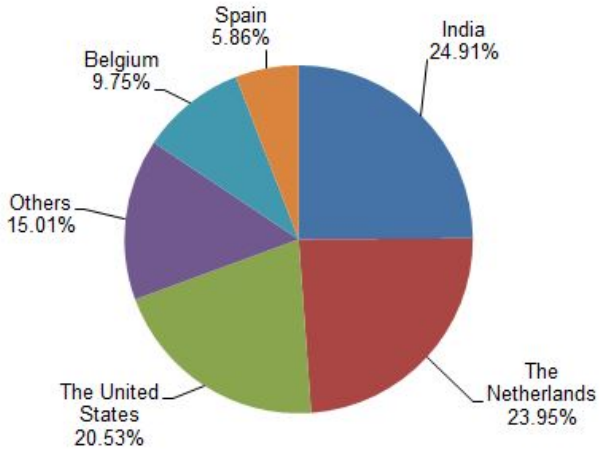
Source: CCM & China Customs

Figure 15: China's exports of P2O5 by month, Nov. 2015 - Nov. 2016



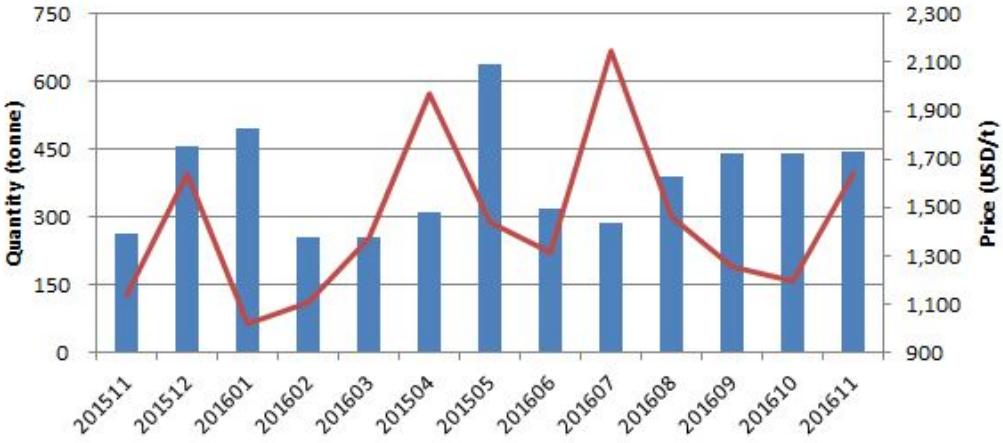
Source: CCM & China Customs

Figure 16: China's export destinations of P2O5, Nov. 2016



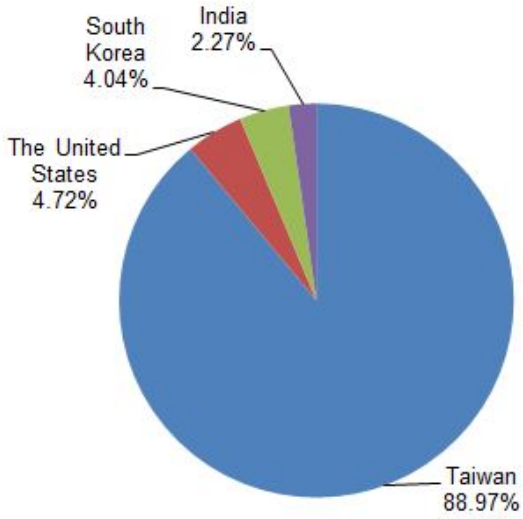
Source: CCM & China Customs

Figure 17: China's exports of POCl3, Nov. 2015 - Nov. 2016



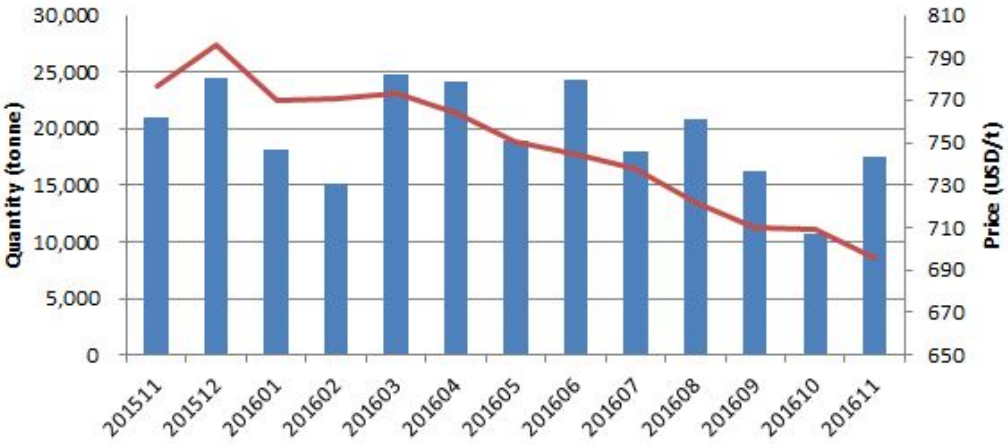
Source: CCM & China Customs

Figure 18: China's export destinations of POCL3, Nov. 2016



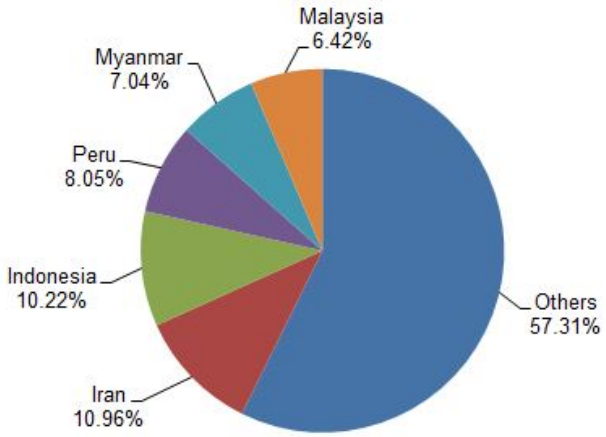
Source: CCM & China Customs

Figure 19: China's exports of STPP by month, Nov. 2015 - Nov. 2016



Source: CCM & China Customs

Figure 20: China's export destinations of STPP, Nov. 2016

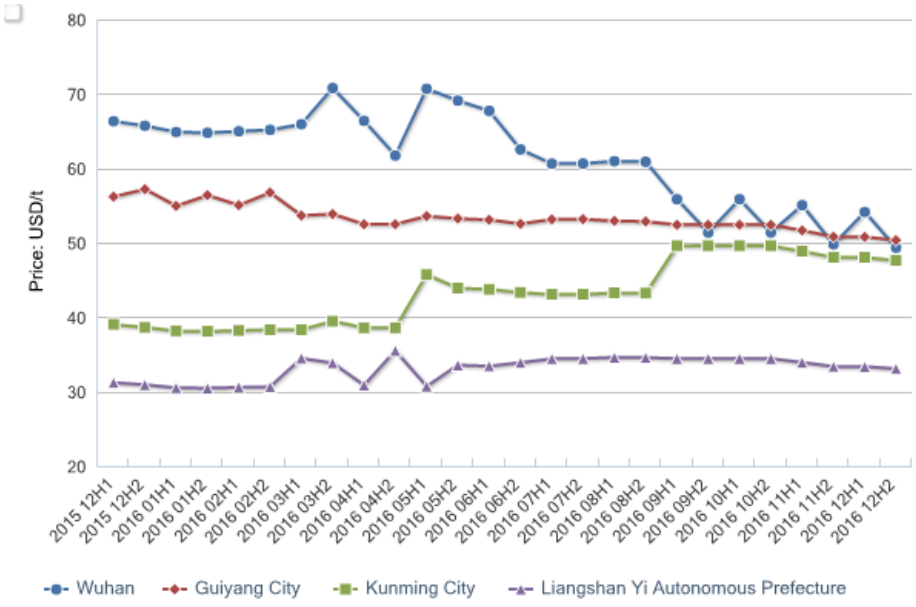


Source: CCM & China Customs

Price Update

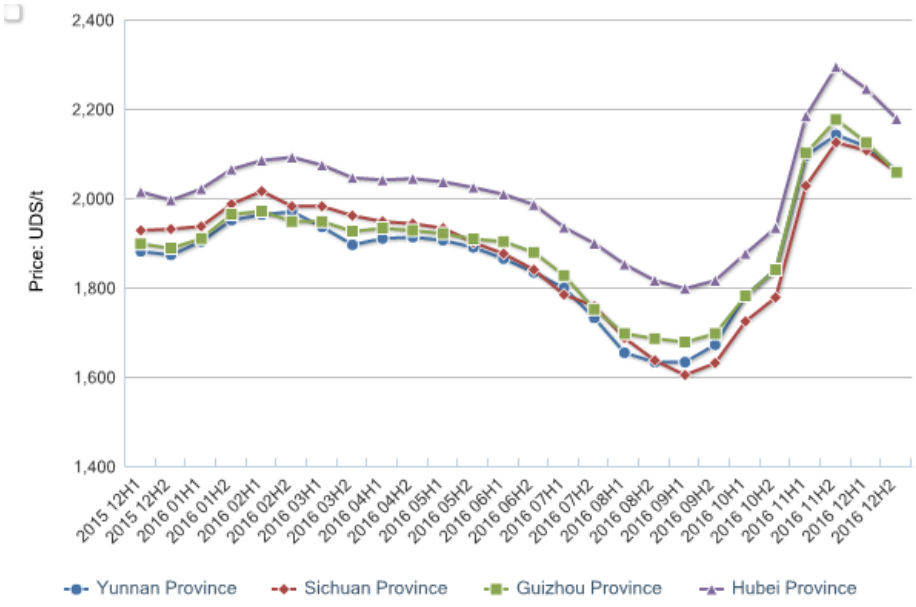
Price monitoring of phosphate chemicals in Dec. 2016

Figure 21: Ex-works price of phosphorus ore in China, Dec. 2015-Dec. 2016



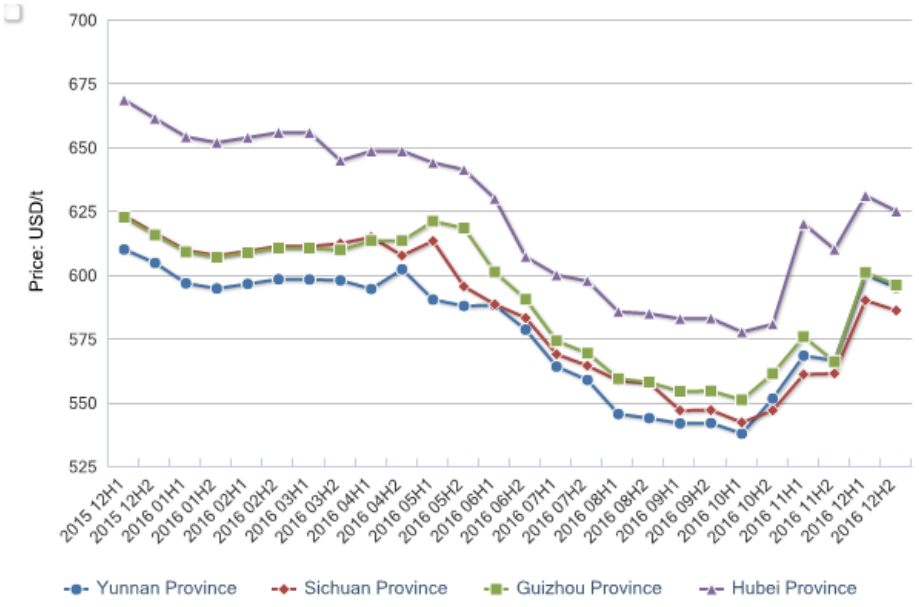
Source: CCM & China Customs

Figure 22: Ex-works price of yellow phosphorus in China, Dec. 2015-Dec. 2016



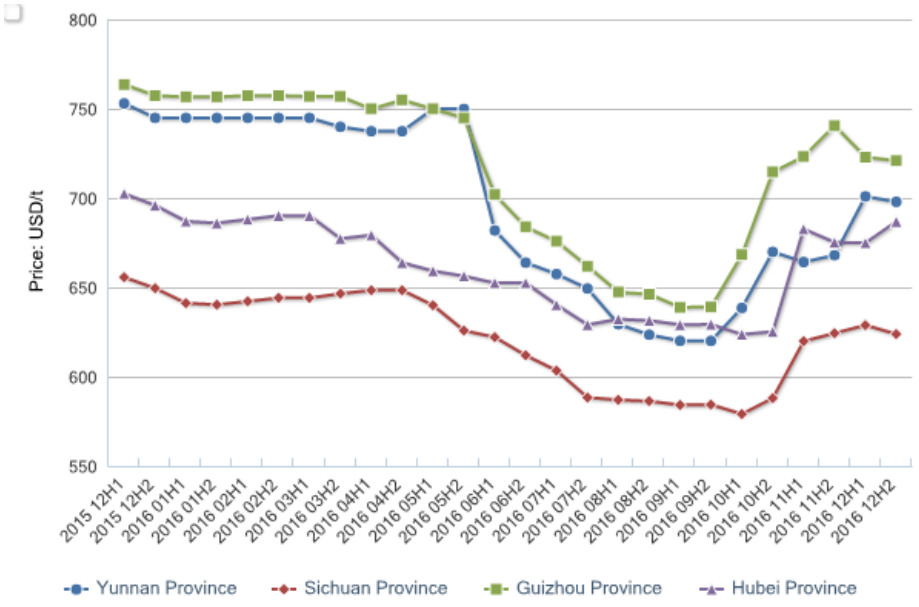
Source: CCM & China Customs

Figure 23: Ex-works price of industrial grade phosphoric acid in China, Dec. 2015-Dec. 2016



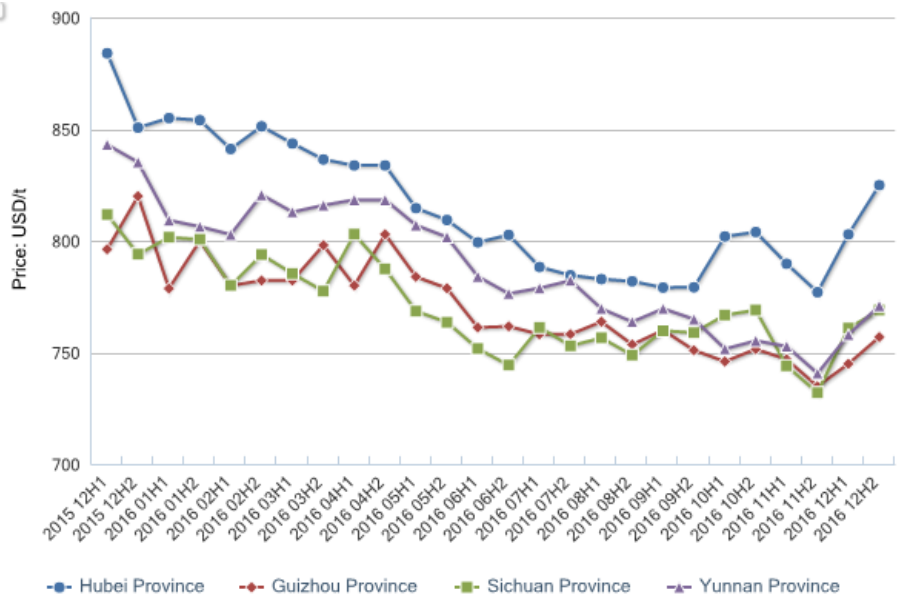
Source: CCM & China Customs

Figure 24: Ex-works price of food grade phosphoric acid in China, Dec. 2015-Dec. 2016



Source: CCM & China Customs

Figure 25: Ex-works price of industrial grade STPP in China, Dec. 2015-Dec. 2016



Source: CCM & China Customs

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