

FERTILIZER INDUSTRY UPDATE REPORT

December 2020

POSITIVE PROSPECTS FROM AGRICULTURE, FERTILIZER COMPANIES CONTINUED TO WAIT FOR VAT POLICY

“... Vietnam's fertilizer industry grows positively in 2020 despite the global pandemic. In 2021, the positive prospects from agriculture is the factors driving the growth of fertilizer consumption in Vietnam. With the favorable weather forecast in 2021 and high prices of agricultural products, will be a good condition for farmers to increase their cultivation, improve productivity, thereby increasing fertilizer demand. In addition, the VAT policy on fertilizers is an important factor to follow in 2021...”

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HIGHLIGHTS

GLOBAL FERTILIZER INDUSTRY

The global fertilizer industry in 2020 is less affected by the Covid-19 pandemic. Global fertilizer consumption is estimated at 191.4 million tons, +1.5% yoy due to the favorable factors in the global agricultural industry. South Asia is a key growth driver for global fertilizer demand in 2020. Meanwhile, East Asia and West Asia, which are strongly affected by the Covid-19 pandemic, have to face with a decline in fertilizer demand.

After a short-term supply chain disruption, fertilizer demand is forecast to accelerate in 2021. According to IFA's forecast, global fertilizer demand in 2021 will reach 194.9 million tons, +1.8% compared to 2020 due to the recovery of demand in most regions. The rapidly increasing fertilizer demand will pull the world fertilizer prices up. Urea price is expected to increase ~3.0% in 2021, DAP price will continue to increase slightly ~2.6%, meanwhile, potash price is forecasted to increase higher at +3.6% as demand recover in areas affected by the disease, especially in China.

In the medium term, global fertilizer demand will grow steadily and oversupply will continue. IFA forecasted prospects for the period 2021F - 2024F, global fertilizer demand is expected to grow at CAGR of +0.9% per year, reaching 198.5 million tons in 2024. Meanwhile, the global fertilizer industry is expected to continue adding capacity and operating in the next five years. With an average annual growth in supply of +1.9% per year, it is forecasted that oversupply will continue during this period.

VIETNAM'S FERTILIZER INDUSTRY

Vietnam's fertilizer industry grows positively in 2020 despite the global pandemic. In 11M2020, domestic fertilizer production increased compared to the same period in 2019: Urea fertilizer reached ~2.19 million tons (+7.3% yoy), NPK fertilizer reached ~2.64 million tons (+3.5% yoy) and DAP fertilizer reached 339.4 thousand tons (+3.3% yoy). Fertilizer exports and imports surged despite supply chain and logistics disruptions. In which, fertilizer import in 11M2020 reached 3.64 million tons, +7.2% yoy. Fertilizer exports also increased by 38% yoy thanks to disadvantages in the Chinese market. Although the demand for fertilizer in 2020 is negatively affected by extreme weather conditions, in general, the business results of leading enterprises have grown significantly.

Domestic fertilizer prices in 2020 recover from the three-year low. In 2020, Vietnam's fertilizer prices sharply fluctuate, especially single fertilizers such as Urea, DAP, and Potassium. Most fertilizers drop to the bottom in the middle of the year and recover in the last months of 2020. Meanwhile, domestic NPK fertilizer prices will be stable throughout 2020, creating conditions for NPK fertilizer producers to benefit from this price difference.

In 2021, the positive prospects from agriculture is the factors driving the growth of fertilizer consumption in Vietnam. With the favorable weather forecast in 2021 and high prices of agricultural products, will be a good condition for farmers to increase their cultivation, improve productivity, thereby increasing fertilizer demand. In addition, the VAT policy on fertilizers is an important factor to follow in 2021.

INVESTMENT RECOMMENDATIONS

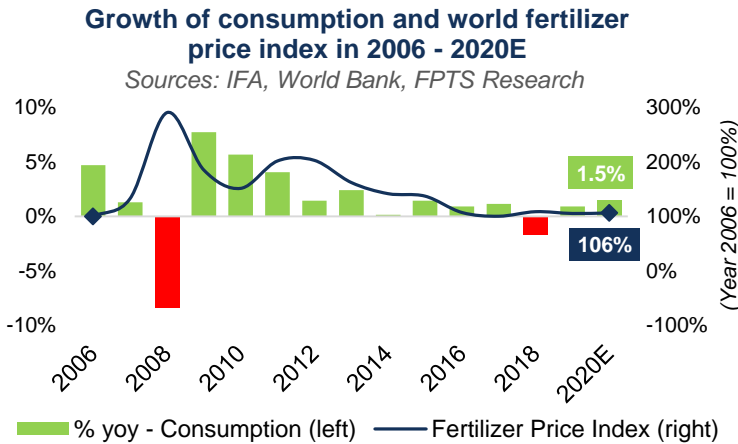
With positive industry prospects in 2021, most of the domestic fertilizer companies will benefit. We recommend **MORE FAVORABLE** for Vietnam's fertilizer industry in 2021. Investors can consider investment opportunities in leading firms with strong competitiveness and good financial status (DPM), or firms that have prospects to export products to Asian countries (DCM and BFC). If the VAT policy is proposed and approved by the National Assembly in 2021, most fertilizer domestic firms will benefit (of which LAS is the biggest beneficiary).

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ABBREVIATIONS AND GLOSSARY OF TERMS

BTU	British Thermal Unit
CAGR	Compounded Annual Growth rate (%)
EECA	Eastern Europe and Central Asia
ENSO	El Nino Southern Oscillation - El Nino and La Nina phenomena, related to fluctuation of barometric pressure between the two banks of the East Pacific and the West Pacific - East Indian Ocean (called the Southern Oscillation, to differentiate it from barometric fluctuations in the North Atlantic)
FAO	Food and Agriculture Organization
IFA	International Fertilizer Association
IFASTAT	Statistical Information of International Fertilizer Association
MARD	Vietnam Ministry of Agriculture and Rural Development
MOIT	Vietnam Ministry of Industry and Trade
OECD	Organization for Economic Co-operation and Development
OPEC	Organization of the Petroleum Exporting Countries
PVN	PETROVIETNAM – Vietnam Oil and Gas Group
VAT	Value added tax
WCE	Western and Central Europe
WTO	World Trade Organization

A. GLOBAL FERTILIZER INDUSTRY
1. Supply and demand increase, global fertilizer prices fluctuate sharply in 2020
1.1. The world fertilizer supply and demand increased rapidly despite the Covid-19 pandemic


In 2020, global fertilizer demand is estimated at 191.4 million tons of nutrients, +1.5% compared to 2019 (equivalent to +2.9 million tons). In 2020, global agricultural supply chain is less disrupted by the Covid-19 pandemic than other commodities. Food, agricultural products and fertilizers are essential sectors so the production and transport of goods are not interrupted during the closing time. Besides, bulk shipping, the main mode of transportation for agricultural goods, is less affected by restriction orders than other modes of transport.

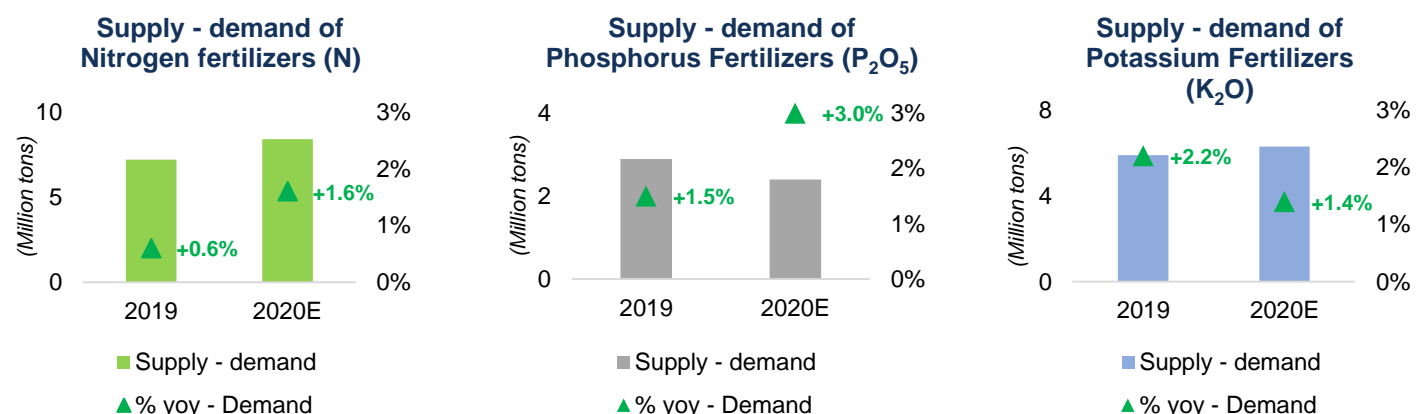
Global fertilizer demand in 2020 increases significantly due to favorable factors such as:

(i) Responding to short-term disruptions, a number of countries have planned to support food and agriculture supply chains. More than 20 countries affected by the pandemic have considered fertilizers as essential commodities, so the production and supply of fertilizers are less disrupted. Some countries such as the United States, China have set up aid packages for farmers and agribusinesses. France, Italy, UK and Australia have had support measures to tackle labor shortages and ensure food security.

(ii) Prices of agricultural products have recovered and weather has been more favorable in major farming areas. The high price of agricultural products such as rice, wheat, corn, soybeans, ... created good conditions for farmers to invest in fertilizers and cultivate crops. Along with that, the weakening domestic currency in major agricultural exporting countries, helping agricultural products to export at higher prices, stimulating the need to care for crops, increasing fertilizer consumption.

Despite the growth in global agricultural production, some crop segments are still negatively affected by the Covid-19 pandemic such as biofuel crops and vegetables. However, the proportion of fertilizer use of this crops is not large, so it doesn't have much impact on global fertilizer consumption.

South Asia is a key growth driver for global fertilizer demand in 2020, followed by Latin America and North America. Eastern Europe & Central Asia (EECA), Africa, Oceania and Western & Central Europe (WCE) are expected to consume about 100 thousand tons of nutrients per region by 2020. By contrast, East Asia and West Asia is the regions heavily affected by the Covid-19 epidemic, facing a decline in fertilizer demand. In terms of growth, the fastest growing market is South Asia, followed by Latin America, Oceania, Africa and North America.



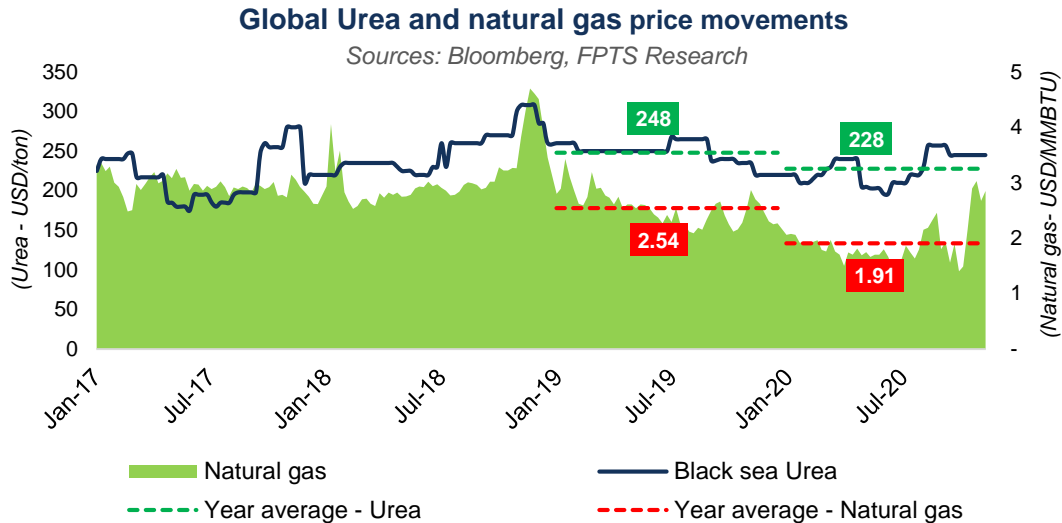
Sources: IFA, FPTs Research

Significant growth in fertilizer demand in 2020 for phosphorus fertilizers (+3.0% yoy), Nitrogen fertilizers (+1.6% yoy) and Potassium fertilizers (+1.4% yoy). When the demand for grains such as rice, wheat, maize, ... increases sharply during the pandemic rather than crops such as vegetables, sugar, palm oil, ... stimulated consumption of phosphorus fertilizers and Nitrogen than for Potassium fertilizer.

(Details about Fertilizer industry overview at [Fertilizer Industry Report - FPTS - Sep2019](#))

1.2. Global Fertilizer prices fluctuate sharply in 2020

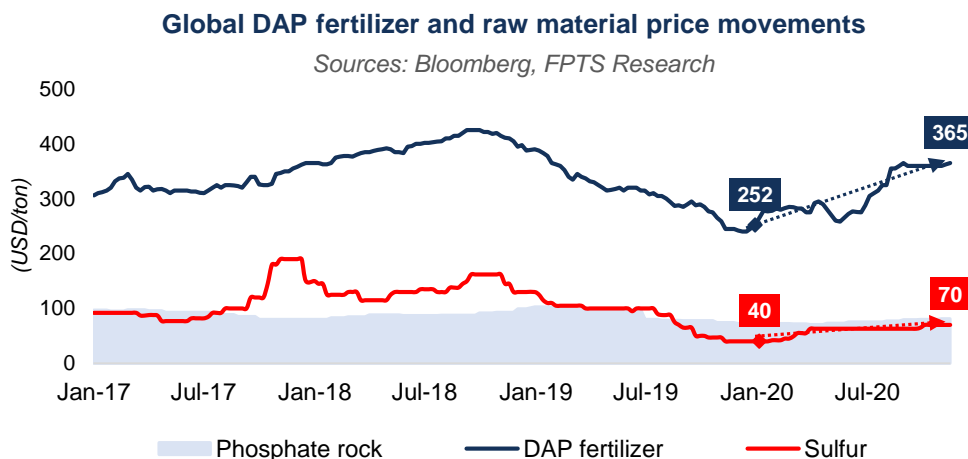
► The world Urea price dropped significantly due to the drop in natural gas price



In Nov2020, average price of Black Sea Urea 2020 reached 228 USD/ton, down 8.1% from average of 248 USD/ton in 2019. Before effects of Covid-19 pandemic, energy prices plummeted due to low demand. Average brent oil price in Oct2020 was only 40 USD/barrel, down 32.8% over the same period in 2019. Meanwhile, average natural gas price in 11M2020 reached 1.91 USD/MMBTU, down 24.8% compared to the 2019 average.

More than 2/3 of global Nitrogen quantity is produced from natural gas, so, before the sharp drop in natural gas prices, global Nitrogen price also dropped significantly, especially Urea. However, decrease in Urea price (-8.1% yoy) was much lower than natural gas price fluctuation (-24.8% yoy) due to increasing Urea fertilizer demand in main crops while supply was interrupted due to disease. Along with that, main coal producers in China have cut production to set domestic floor prices, causing anthracite and bituminous coal prices to rise more than 10% since the beginning of the year (main raw material for Urea production in China). It is expected that by the end of 2020, Urea fertilizer price will increase slightly at 250 - 260 USD/ton due to increase in fertilizer demand in 2020/21 Winter - Spring crop and energy prices are recovering in last months of the year.

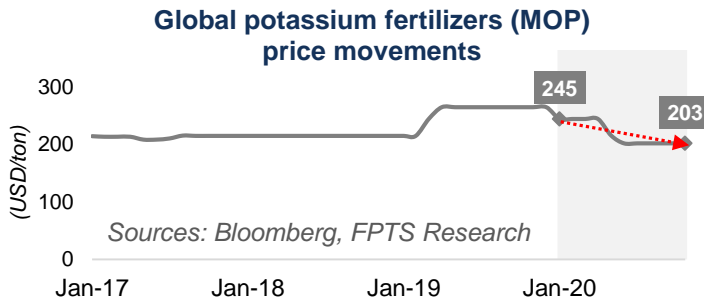
► The world DAP fertilizer price recovered quickly from the bottom level in 2017 - 2020



As of November 2020, the world DAP fertilizer price reached 365 USD/ton, +52.1% yoy, under pressure from shortage of supply and rising raw material costs. The rapidly increasing DAP fertilizer price reflects more expensive input costs when global sulfur price increases sharply (+75% yoy) in 2020. Along with that, production disruption due to the Covid-19 outbreak in Hubei province, China - the region that accounts for ~28% of total DAP capacity of the world's largest DAP producer, also causes a sharp increase in DAP fertilizer prices.

Meanwhile, strong increase in demand in Q3 and Q4.2020 in main farming areas supported increase in DAP prices. Favorable weather conditions in Australia, Brazil, India and North America, with devaluation of the Real-Brazilian currency, lead to higher prices for domestic agricultural products, thereby boosting need to cultivate crops of these countries.

► **Potassium fertilizer price (MOP) plummeted due to oversupply pressure globally**

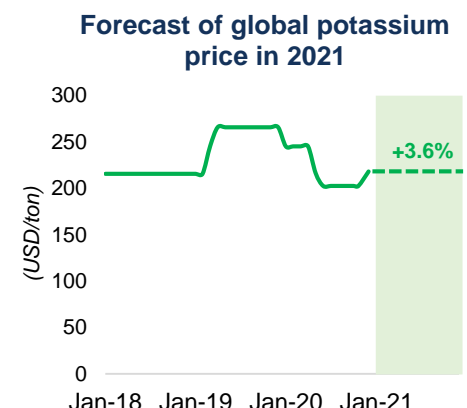
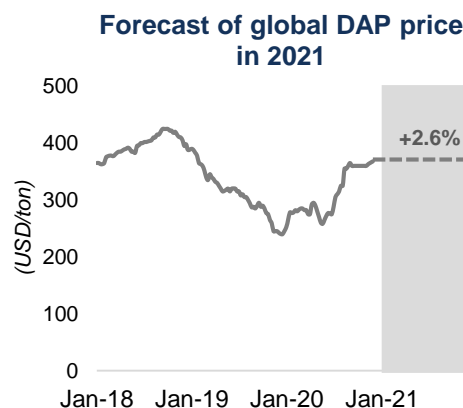
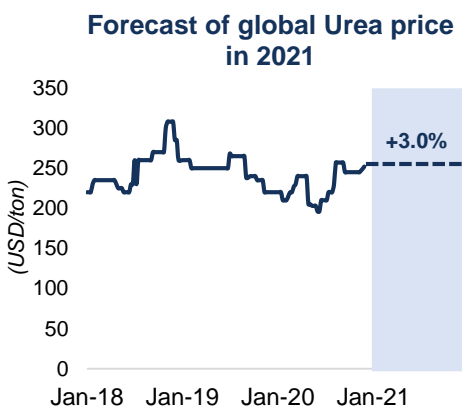


Potash fertilizer price (MOP) in Nov2020 reached 203 USD/ton, down 17% compared to beginning of the year due to pressure of oversupply globally. Along with that, disruption of trade in China and fall in palm oil prices led to decrease in potassium fertilizer demand in East Asia. While favorable weather conditions only partially support demand recovery in Brazil, India and North America. It is expected that global potash fertilizer price will decrease by 14% in the whole year 2020.

2. Outlook – Stable growth in the period 2021F – 2024F

2.1. Short term: Fertilizer prices are forecast to increase slightly in 2021

After a short-term disruption in 2020, fertilizer demand is forecast to accelerate in 2021. According to International Fertilizer Association (IFA) forecast, global fertilizer demand in 2021 is expected to reach 194.9 million tons of nutrients, increases by 1.8% compared to 2020. Prolonged Covid-19 pandemic may not have a significant impact on the global fertilizer supply chain, as occurred in 2020. However, a slow and uneven global economic recovery across countries could affect food consumption needs, government budgets, and farmers' financial condition. Hence, global fertilizer demand may take longer to speed up again. Fertilizer demand in 2021 is expected to be driven by Nitrogen fertilizers (+1.7% yoy, equivalent to +2.0 million tons), while Phosphorus and Potassium fertilizers are expected to increase only slightly (+1.1 million tons of P₂O₅, +2.1% yoy and +0.7 million tons of K₂O, +1.6% yoy).



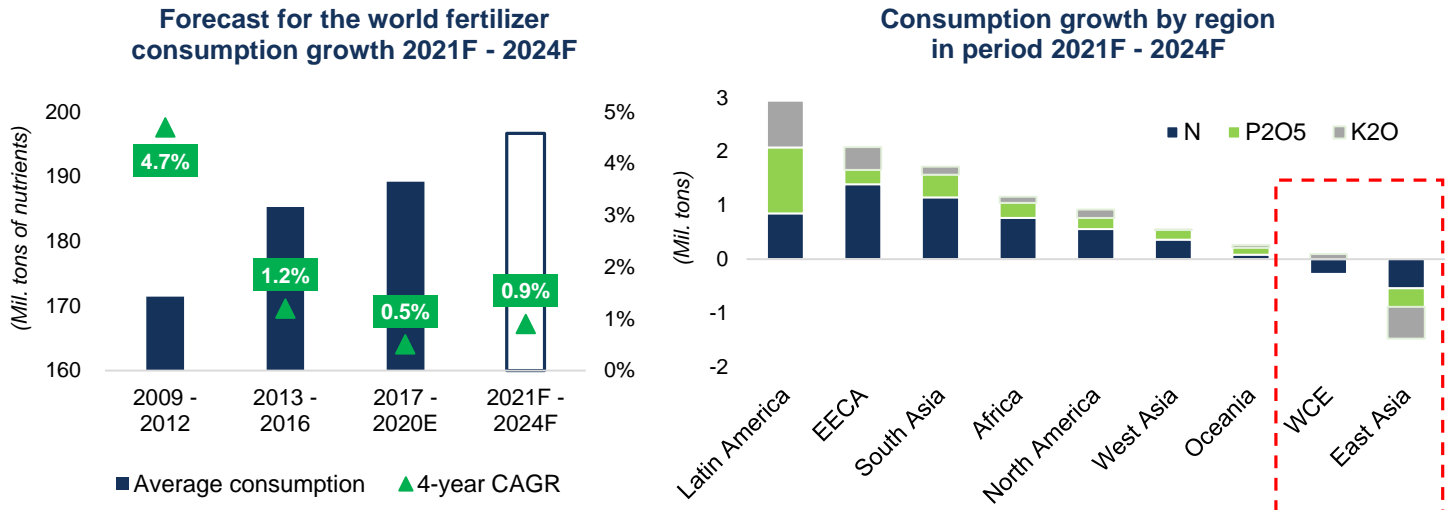
Sources: Bloomberg, World Bank, FPTs Research

Consumption demand increases rapidly, causing global fertilizer prices to increase in 2021. Urea price is expected to increase ~3.0% in 2021 as Urea demand recovers from areas strongly affected by disease such as Europe and North America. DAP fertilizer price is expected to continue to increase slightly ~2.6% in 2021 as sulfur prices are expected to cool down in the near future. Meanwhile, potassium prices are forecast to rise higher at +3.6% in 2021 as demand recovers in the affected areas, especially demand in China.

2.2. Medium term: Oversupply continues in the period 2021F – 2024F

Fertilizer demand is forecast to grow steadily in the period 2021F – 2024F

IFA forecasted prospects for period 2021F – 2024F, global fertilizer demand is expected to grow at an average rate of ~0.9% per year, reaching 198.5 million tons of nutrients by 2024. Phosphorus fertilizer consumption is forecast to recover faster (+1.1% per year), while Nitrogen is +0.9% per year and Potassium is +0.8% per year.



Sources: IFA, FPTs Research

Latin America is expected to be main contributor to global consumption growth in period 2021F – 2024F, accounting for ~37% of the total growth, followed by EECA (27%), South Asia (22%), Africa (15%) and North America (12%). East Asia, West and Central Europe are expected to slow down this rise, with total fertilizer demand expected to drop significantly, with the strongest drop being China.

Supply continues to be plentiful to meet increased fertilizer demand in 2021F – 2024F

The world fertilizer industry is expected to continue adding capacity and operating in the next five years. With a modest annual growth rate of +0.9% per year in demand, compared with an average annual growth of +1.9% per year in supply, it is expected to continue oversupply globally.

Global nitrogen capacity increases, mainly due to expansion of Urea production capacity in South Asia (led by India), Africa and EECA. Urea supply - demand imbalance is expected to increase in medium term. For phosphorus fertilizer, supply and demand are expected to grow moderately in the coming time (+1.6% per year in supply and +1.1% per year in demand). Phosphorus supply-demand surplus is expected to decrease slightly in 2021, then continue to increase until 2024. Large-scale capacity additions to global potash production, coupled with relatively modest growth in potassium demand, will result in a growing capacity surplus for this fertilizer.

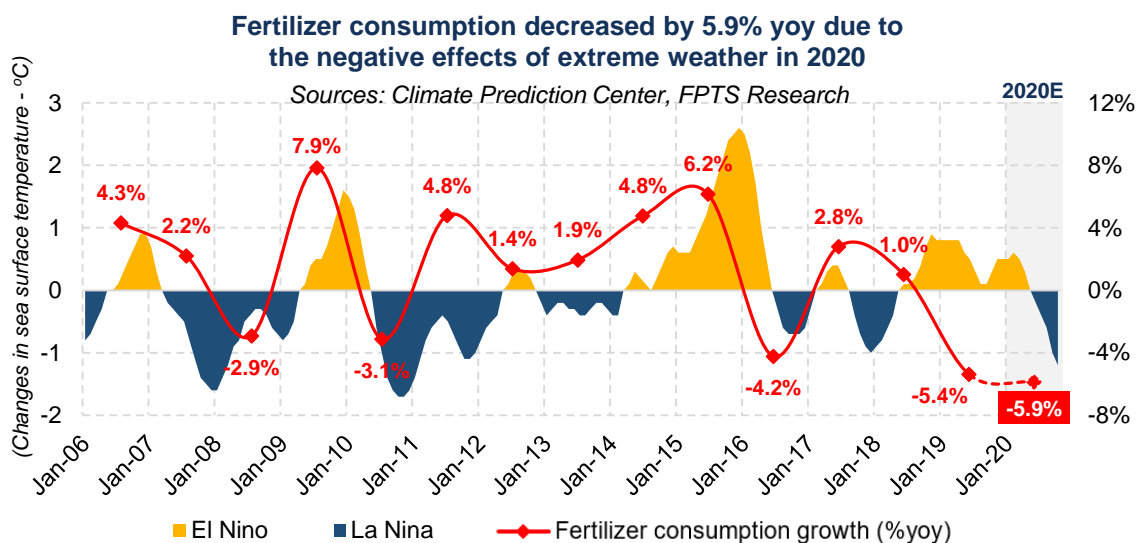
B. VIETNAM'S FERTILIZER INDUSTRY

1. Vietnam's fertilizer supply-demand in 2020 is less affected by Covid-19 pandemic

1.1. Weather in 2020 has a negative impact on fertilizer consumption

Extreme weather in 2020 has a direct impact on agricultural cultivation in Vietnam. El Nino phenomenon in the first half of year causes dry weather in most of main farming areas, especially drought in the South Central Coast, Central Highlands and severe saline intrusion in Mekong River Delta. Along with that, to cope with salty drought in 2020, Mekong River Delta provinces changed Winter - Spring crop schedule to one month earlier, fertilizer demand for this crop is mainly consumed at the end of 2019, causing fertilizer demand in the first half of 2020 to plummet.

In the second half of 2020, La Nina phenomenon strengthened at the end of year, causing prolonged flooding in the Central and Southeast regions, causing damage to agricultural cultivation. Meanwhile, Mekong River Delta is less affected by floods, along with the increase in prices of agricultural products to help farmers have conditions to invest in fertilizer, fertilizer consumption is recovered in 2020/21 Winter - Spring crop.



Facing the negative impact of the weather on Vietnam's agriculture, Vietnam's fertilizer consumption in 2020 was estimated at 9.73 million tons, down ~5.9% compared to 2019. In which, consumption of NPK, Urea and DAP fertilizers all fell sharply, decreasing respectively by 200.000 tons (-6% yoy), 180.000 tons (-8% yoy) and 100.000 tons (-10% yoy) and demand decreased mainly in the Central and Southeast.

1.2. Domestic fertilizer production increased significantly, domestic supply was plentiful

In 2020, Vietnam faced two widespread outbreaks of Covid-19. With effective anti-epidemic measures from the Government and cooperation of the people, pandemic is quickly under control. No domestic fertilizer factories have to shut down. Along with that, fertilizers are classified as essential commodities by the Government, so the domestic fertilizer supply chain is not interrupted because of disease problems.

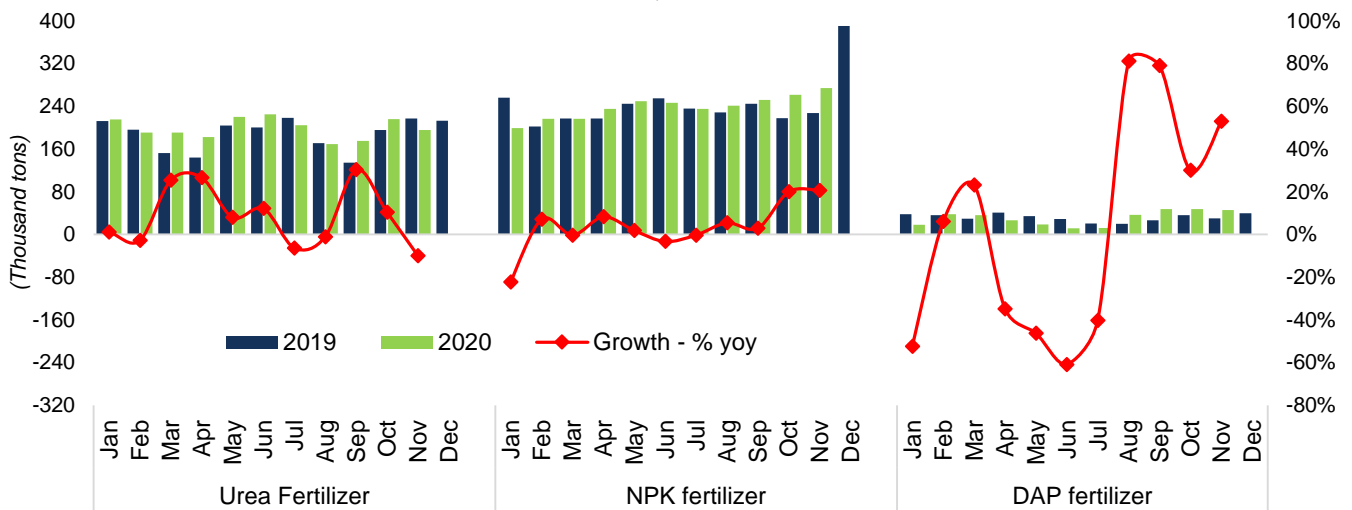
In 11M2020, Vietnam's fertilizer production increased significantly compared to the same period in 2019:

(i) Domestic Urea production in 11M2020 is estimated at ~2.19 million tons (+7.3% yoy). This year, domestic Urea factories didn't perform long-term maintenance. Short-term maintenance activities at factories such as Ha Bac Fertilizer, Ninh Binh Fertilizer, and Ca Mau Fertilizer took place rapidly in July and August, causing output to decrease slightly in these two months.

(ii) NPK fertilizer production in 11M2020 is estimated at ~2.64 million tons (+3.5% yoy). Increase in output mainly came from small and medium NPK factories, while NPK production of Vietnam National Chemical Group (Vinachem) decreased sharply (-12.2% yoy). In October and November 2020, NPK output increased sharply because factories boosted production to prepare for 2020/21 Winter - Spring crop.

Domestic fertilizer production in 11M2020 increased significantly compared to 2019

Sources: MOIT, FPTs Research



(iii) DAP production in 11M2020 is estimated at 339,400 tons (+3.3% yoy). In the first half of 2020, plentiful import supply and low demand, domestic DAP factories have reduced production and maintenance in June - July, reducing pressure on supply of the whole market. In the following months, DAP demand for the Summer - Autumn crop and Winter - Spring crop increased again, domestic DAP production increased again.

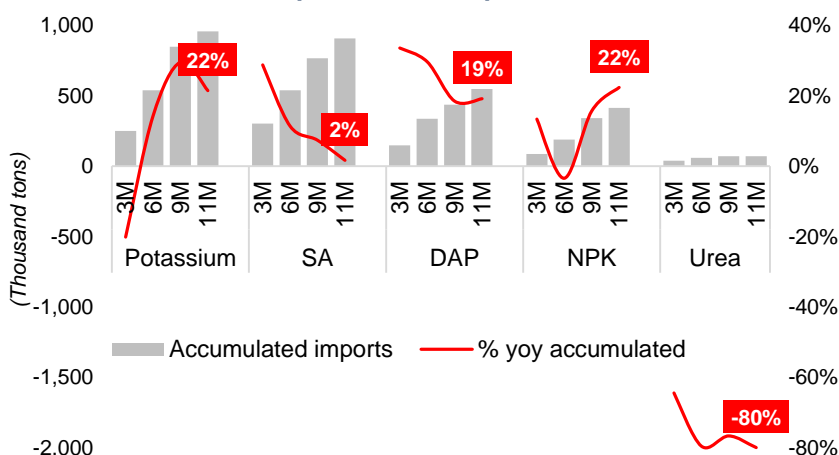
Domestic fertilizer production in 11M.2020 is at a high level, while fertilizer import still increased, the total fertilizer supply in whole country is quite abundant. Domestic demand was negatively affected by drought and saline intrusion in the Mekong Delta and Central Highlands in the first five months of 2020, although it recovered slightly in the last months of the year due to increased fertilization demand in 2020/21 Winter - Spring crop, but still cannot offset the decline in the first half of 2020. Oversupply puts pressure on fertilizer prices during the year.

1.3. Fertilizer exports and imports increased despite global supply chain disruptions

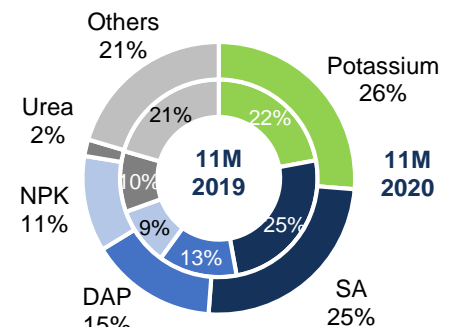
► **Fertilizer imports of Vietnam in 11M2020 reached 3.64 million tons, +7.2% yoy**

Fertilizer imports of Vietnam in 11M2020 reached 3.64 million tons, +7.2% yoy, causing oversupply in the domestic market. Import volume of most fertilizers that cannot be produced domestically increased sharply: Potassium fertilizer (+21.5% yoy), SA fertilizer (+1.7% yoy), DAP fertilizer (+19.2% yoy) and NPK fertilizer (+22.4% yoy). Only Urea fertilizer imports fell sharply over the same period in 2019 (-79.9% yoy) due to abundant domestic urea supply and a sharp drop in domestic Urea price following FO oil price, increasing competitiveness compared with imported Urea products.

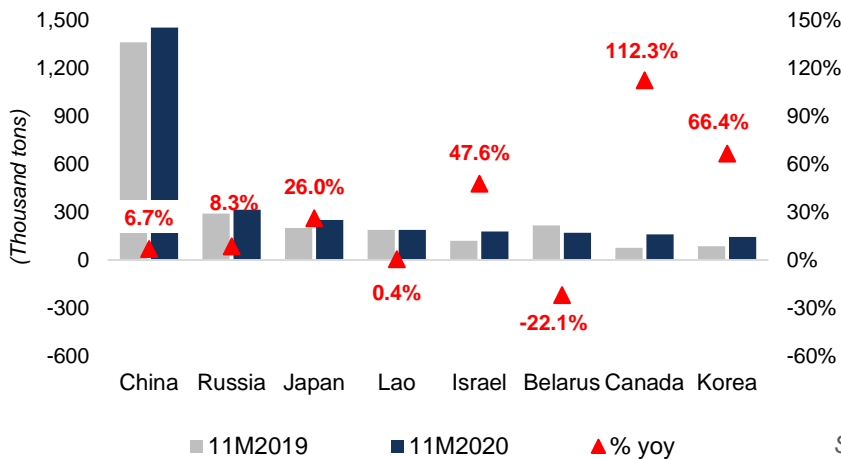
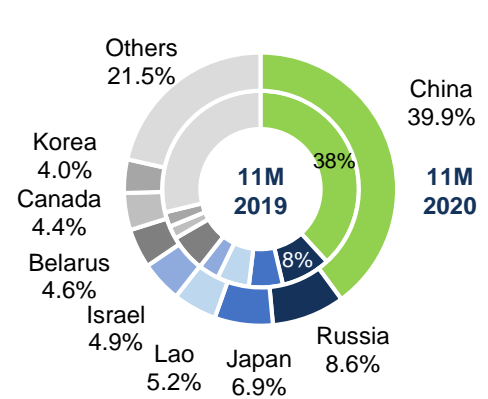
Fertilizer imports increased sharply in most products, except Urea



Potassium and SA account for the largest proportion in structure of imported products



Sources: General Department of Vietnam Customs, FPTs Research

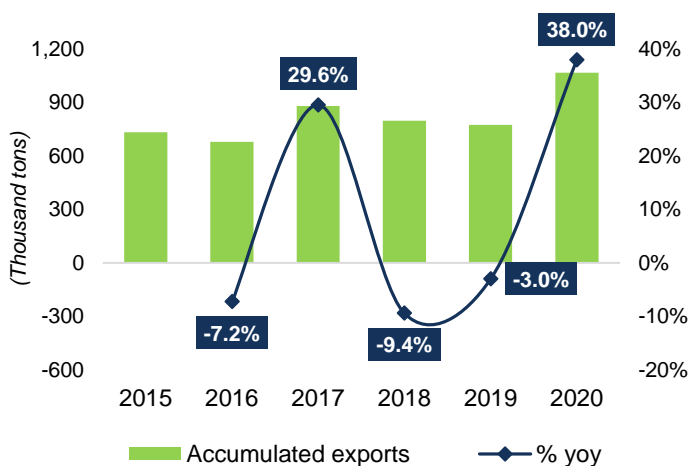
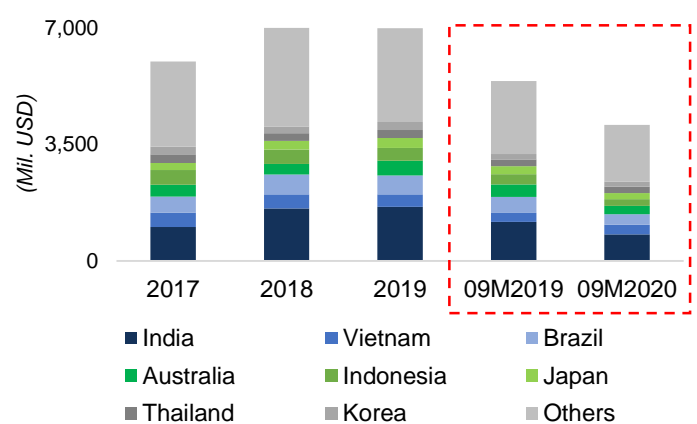
Fertilizer imports increased sharply from most main markets

China accounts for the largest share in import market structure


Sources: General Department of Vietnam Customs, FPTs Research

In terms of market, Vietnam's fertilizer imports increased strongly in most major markets such as China, Russia, Japan, Israel, Canada, Korea ... In which, China is still the largest fertilizer supplier to Vietnam in 11M2020. Total amount of fertilizer imported from China in 11M2020 reached 1.45 million tons, +6.7% yoy, accounting for ~40% of market share of Vietnam's imported fertilizers. Fertilizers imported from China increased: Potassium fertilizer (+1,043% yoy), foliar fertilizer (+194.5% yoy) and DAP (+23.5% yoy) ...

► **Vietnam's fertilizer exports surged thanks to political instability between China and India**

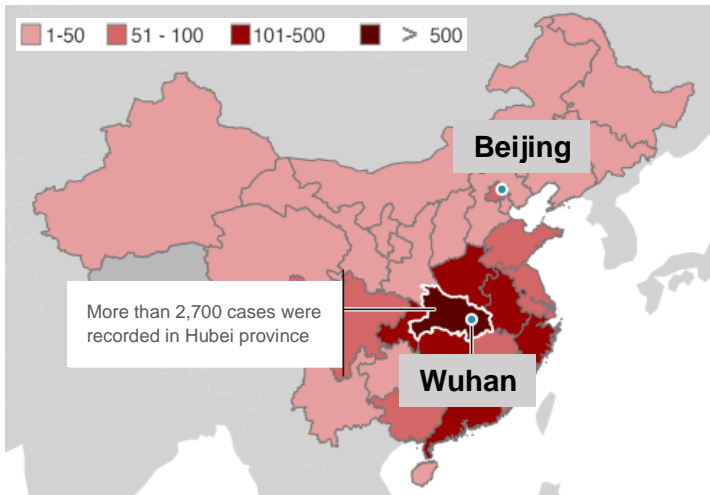
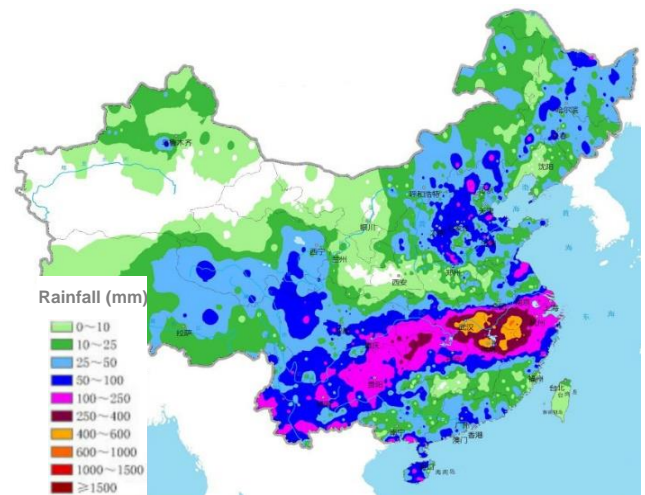
In 2020, Vietnam's fertilizer exports increased at the highest rate ever. Accumulated 11M2020, Vietnam exported ~1.07 million tons of fertilizers, up 38% over the same period in 2019. The main export fertilizers such as NPK, DAP and Urea are all increased, especially granular Urea. The positive factors affecting fertilizer exports of Vietnam in 2020 come from the supply and demand situation in the Chinese market.

Vietnam's export volume in 11M from 2015 to 2020

Fertilizer export value of China by market


Sources: MOIT, OEC.World, FPTs Research

China is the world's largest fertilizer consumer market and also has an important role in global fertilizer production. Fertilizer production and consumption in China not only has an impact on the world fertilizer market, but also has a strong impact on the Vietnamese market, especially fertilizer imports and exports. In 2020, a number of events in the Chinese market have a positive impact on Vietnam's fertilizer exports, specifically:

(i) In the first half of 2020, China's fertilizer production and consumption was severely affected by Covid-19 pandemic. DAP production plummeted due to the shutdown of factories in Hubei province (the area that accounts for ~28% of China's total DAP capacity) in the face of serious disease developments.

Areas affected by Covid-19 pandemic in China

Rainfall map for June - July 2020


Sources: China National Health Commission, CMA, FPTs Research

(ii) Along with that, double impact from severe flooding situation in June - August 2020 in the southern provinces of China reduces coal production in this region (main material for Urea production in China). This is also home to many of the largest Urea factories, leading to a shortage of Urea supply for export and Urea supply bidding packages of Chinese distributors.

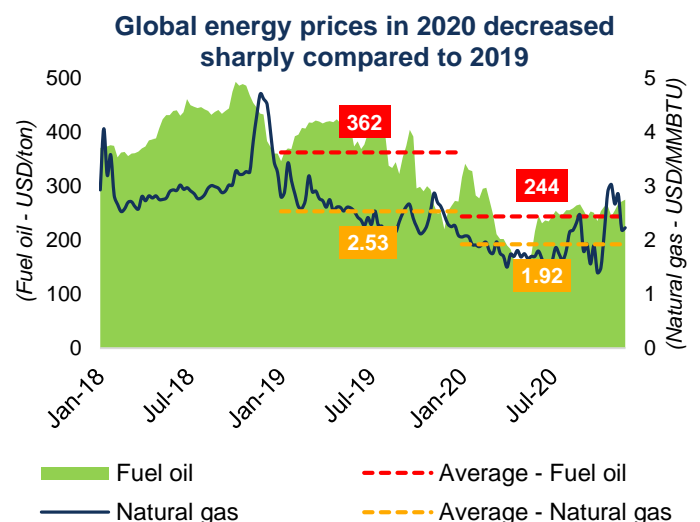
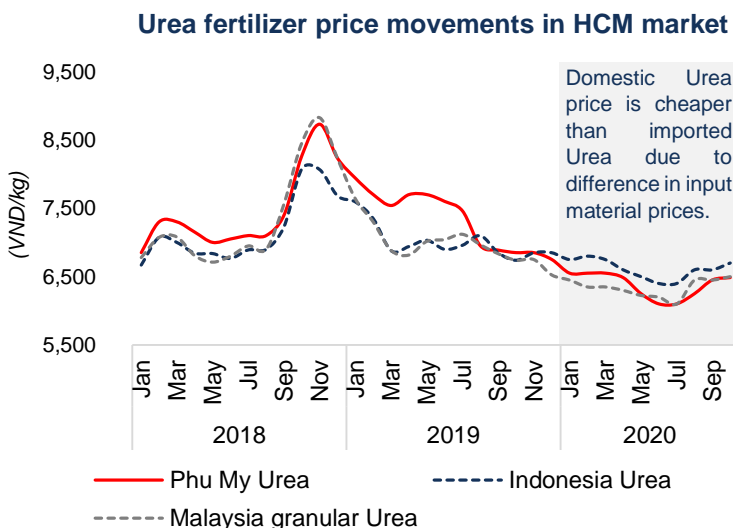
(iii) In particular, political conflict between China and India is still complicated, making import and export activities between the two countries interrupted and be subject to punitive measures against imported goods. India has issued a ban on Chinese Urea suppliers from participating in this country's bid. Besides, India has proposals to expand domestic production capacity or switch to other suppliers such as Vietnam, Korea, and Thailand to replace goods from China.

Therefore, Vietnam's fertilizer exports benefit directly from above factors when fertilizer supply - demand situation in China is negatively affected. China's fertilizer export in 09M2020 plummeted over the same period last year (-24.3% yoy in value), especially exports to Indian (-31.9% yoy) and Southeast Asia – regions that account for nearly 80% of Vietnam's total fertilizer export value.

2. Domestic fertilizer prices plummeted due to oversupply pressure in 2020

In 2020, Vietnam's fertilizer prices fluctuated sharply. Single fertilizer prices (Urea, DAP) fell to the bottom in middle of the year and rose again in last months of the year when demand gradually recovered. Particularly, potash prices still fell sharply in line with world prices due to oversupply pressure and low demand in many regions.

► Domestic Urea fertilizer in 2020 has a competitive advantage in price compared with imported Urea

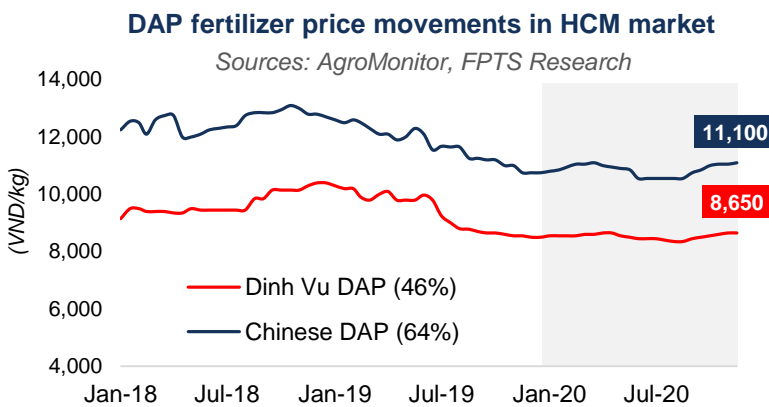


Sources: AgroMonitor, Bloomberg, FPTs Research

Domestic Urea prices fell to the bottom in July 2020 and rebounded at the year end. In July 2020, domestic Phu My Urea price decreased to 6,100 VND/kg, the lowest level in the past 3 years. Abundant domestic supply amid low Urea demand in most of the main farming regions across the country. In the second half of 2020, recovery of world Urea prices supported domestic Urea market. It is expected that Urea market will be more exciting when the whole country enters the Winter - Spring crop in many regions, Urea price is expected to improve in Dec2020.

The difference between domestic Urea and imported Urea prices has begun to narrow since the end of 2019 and reversed in 2020. Accordingly, domestic Urea price in 2020 is more competitive than imported Urea. Fuel oil price plummeted and abundant domestic Urea supply helped domestic factories to push products to the market with competitive prices. Meanwhile, price of Urea imported from Indonesia and Malaysia (accounting for ~90% of the import volume) decreased more slowly than domestic price because global natural gas price decreased slightly than fuel oil price (the world Urea price was directly affected by natural gas price). This is also the reason why Urea import volume decreased by -80% yoy in 11M2020.

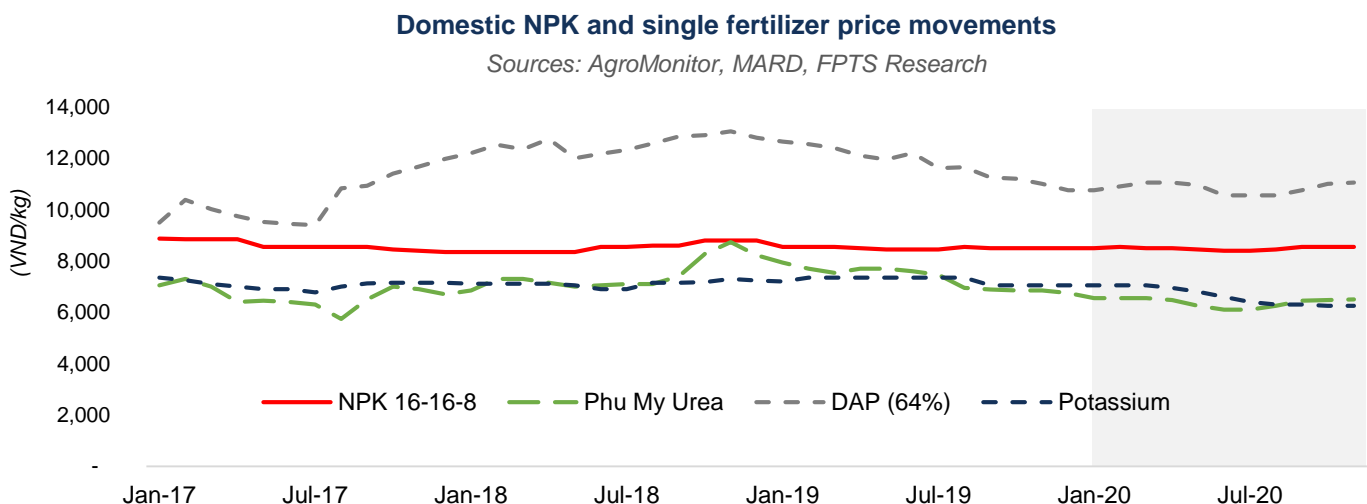
► **DAP fertilizer prices improve in the second half of 2020 when imported prices increase rapidly**



In Oct - Nov 2020, domestic DAP prices improved gradually in the context of import prices continued to rise. In November 2020, Dinh Vu DAP fertilizer price (46%) reached 8,650 VND/kg, gradually improving from the 3-year low (8,350 VND/kg) in August 2020. Meanwhile, Chinese DAP (64%) imported into Vietnam increased sharply in recent months, putting pressure on domestic supplies. In the face of the rise in prices of Chinese DAP fertilizers, domestic DAP also increased slightly but did not keep up with price increase of imported fertilizers.

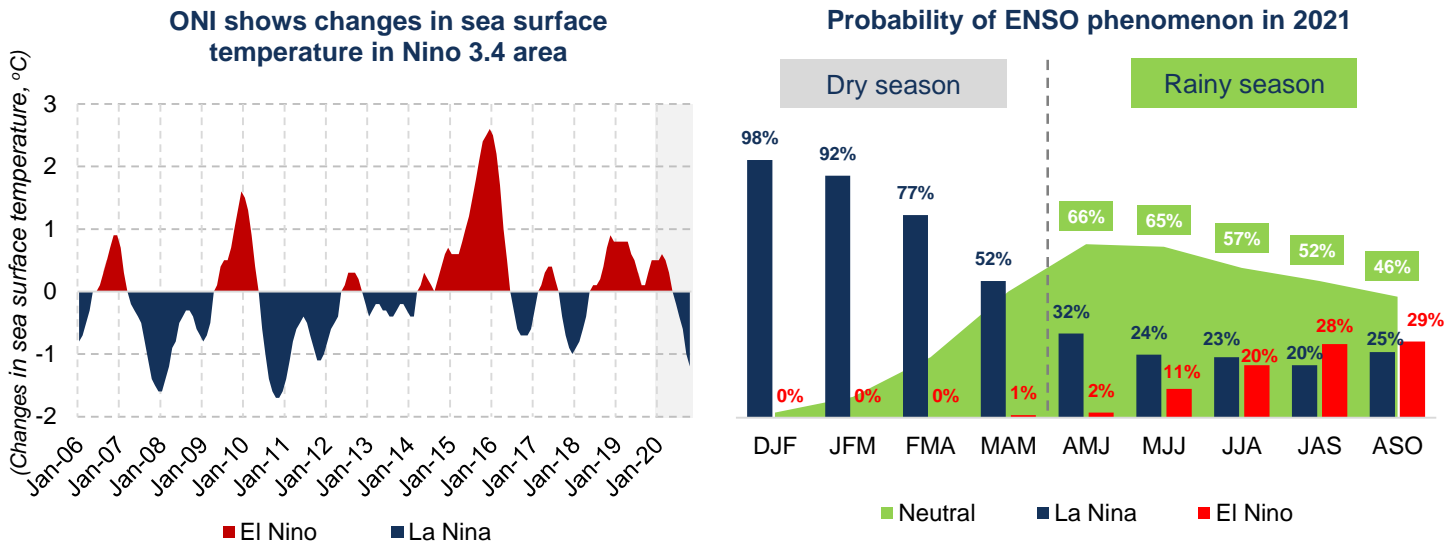
► **NPK fertilizer price is stable, NPK producers benefit from downtrend of single fertilizer prices**

In 2020, domestic NPK fertilizer price is quite stable before the fluctuations of domestic single fertilizer market. NPK 16-16-8 fertilizer in Ho Chi Minh market has prices ranging from 8,400 - 8,550 VND/kg during 2020. While single fertilizer prices (Urea, DAP) fell to the bottom in middle of the year and rose again in last months of the year when demand gradually recovered. Particularly, potash prices still fell sharply in line with world prices due to oversupply pressure and low demand in many regions. Facing such price movements, NPK fertilizer producers from single fertilizers benefit greatly from this price difference.



3. OUTLOOK – Fertilizer consumption is expected to grow thanks to positive outlook from agriculture

3.1. The weather is forecast to be more favorable for agricultural cultivation in 2021



Sources: International Research Institute for Climate and Society (IRI), Climate Prediction Center (CPC), FPT S Research

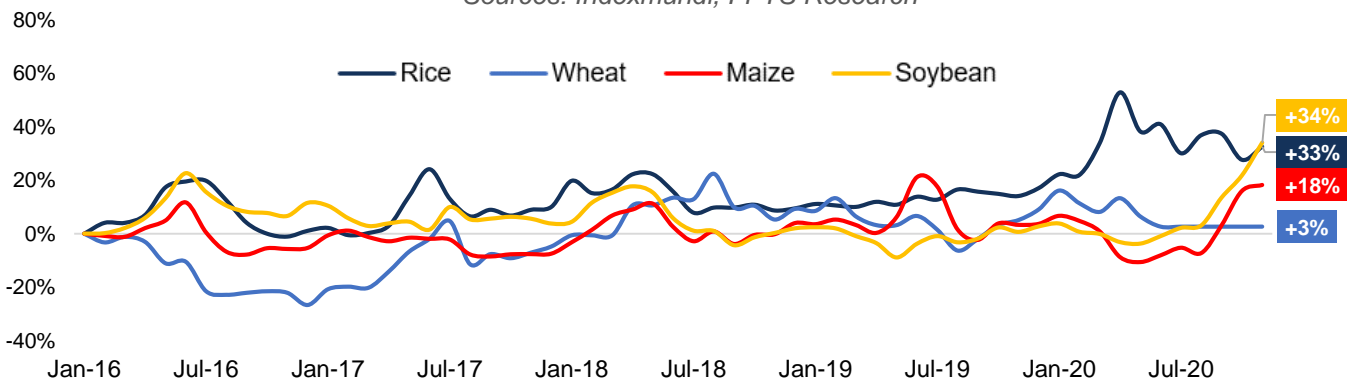
ENSO phenomenon (El Niño Southern Oscillation) is currently in La Niña stage. La Niña phenomenon has started to maintain in Nino 3.4 area from mid-2020 and gradually strengthens towards the end of the year. La Niña is the phenomenon of unusually cold surface seawater, it belongs to cold sea currents that reduce the temperature of areas it passes through, causing more rain. The La Niña phenomenon usually begins from March to June each year and affects most strongly at the end of the year until February next year. Forecasting La Niña phenomenon this year will maintain in the last months of 2020 and last until April - May 2021. This is also the time of dry season in all regions of the country, occurrence of La Niña will cause more rain, reducing impact of drought and saline intrusion in the South of Vietnam.

From May - June 2021, neutral state is expected to return with a probability of 65% - 66% and is likely to last until September - October 2021, after La Niña intensity weakens. Neutral state is expected to provide favorable weather for most of the arable areas across the country. With the above forecast, agricultural cultivated areas are expected to increase, boosting demand for crop fertilization. Fertilizer demand in 2020/21 crop is expected to improve compared to the same period last year, when El Niño phenomenon causes severe drought and saline intrusion in Central Highlands and Mekong Delta in crop year 2019/20.

3.2. Agricultural product prices are at high levels, creating conditions to cultivation and fertilization

Global agricultural product price movements in 2016 - 2020

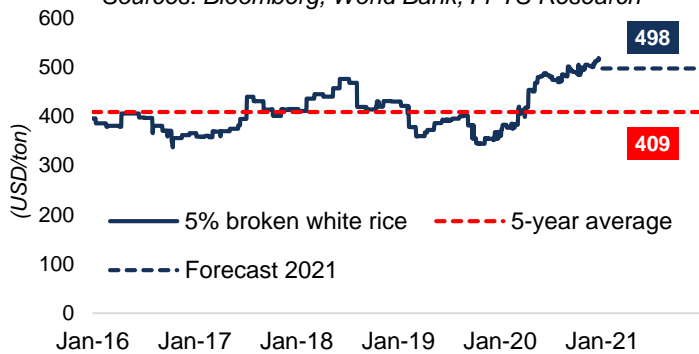
Sources: Indexmundi, FPT S Research



In 2020, agricultural product prices in the world increase sharply, indicating the need for food storage in the global COVID-19 pandemic. In November 2020, global rice price increased by 16% over the same period in 2019. Besides, maize and soybean prices also increased sharply in 2020, +14.5% yoy and +33.1% yoy respectively. The trend of increasing food storage in COVID-19 pandemic took place in many countries such as China, Algeria, Turkey, Morocco, ... Meanwhile, some major food exporting countries have stopped exporting some agricultural products: India (rice), Kazakhstan (wheat), Cambodia (rice), ... Accordingly, Vietnam's agricultural exports also benefit, especially rice.

Export price of Vietnam's 5% broken white rice in 2021 is forecast to remain high

Sources: Bloomberg, World Bank, FPTs Research



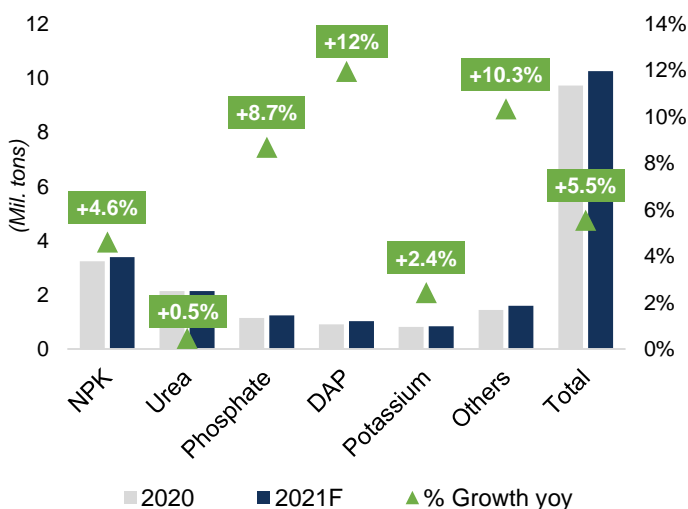
Export price of Vietnam's white rice is currently at the highest level in the past 5 years. In December 2020, export price of Vietnam's 5% broken white rice increased sharply to 516.25 USD/ton, +45.4% yoy, and 26.2% higher than average of the last 5 years. The current rice price is higher than the price 450 - 490 USD/ton of the same product of Thailand and 376 - 382 USD/ton of rice of India. Vietnam's rice price increase was due to prospect of new orders from Philippines, China and Malaysia, while decrease in demand caused Thailand rice prices to fall for seven consecutive weeks.

According to Commodity Market Outlook - November 2020 of World Bank, the world rice price in 2021 is expected to reach an average of 498 USD/ton, 21.8% higher than 5-year average from 2016 - 2020. Rice is a crop with the greatest impact on fertilizer demand in Vietnam. Rice prices are at high levels and the weather in 2021 is forecast to be more favorable, creating good conditions for farmers to increase their cultivated area, strengthen fertilization for crops, thereby boosting fertilizer demand.

3.3. Fertilizer demand is expected to grow positively in 2021

Total fertilizer demand in 2021 is forecast to reach ~10.3 million tons, +5.5% yoy

Sources: AgroMonitor, FPTs Research



With the above favorable factors, along with the reduction of COVID-19 pandemic, total fertilizer demand is expected to recover in 2021. According to AgroMonitor, total fertilizer demand in 2021 is expected to reach ~10.3 million tons, up 5.5% compared to 2020. Consumption of most fertilizers will increase, especially DAP (+12% yoy), phosphate fertilizer (+8.7% yoy) and NPK fertilizer (+4.6% yoy). Urea consumption is forecast to be stable (+0.5% yoy), Potassium fertilizer (+2.4% yoy) and other fertilizers (+10.3% yoy).

In 2021, it is expected that fertilizer demand in the Mekong Delta (the largest fertilizer consuming region in the country) will recover ~4 - 6% yoy, mainly increasing consumption of DAP, NPK and other types such as phosphate fertilizer, organic fertilizer, ...

4. VAT policy on fertilizers – A factor should be watched in 2021

Since 2014, Vietnam's fertilizer industry has experienced fluctuations when VAT policy on fertilizers changed. The main stages of change can be summarized as follows:

Time	Events	Content changes	Influence on businesses
Before 2014	VAT law No. 13/2008/QH12 valid.	VAT rate: 5% (input VAT deductible)	Positive
2014 - 2015	<ul style="list-style-type: none"> • Nov2014: The National Assembly passed Law No. 71/2014/QH13 amending VAT Law No. 13/2008/QH12. • Jan 01, 2015: Law No. 71/2014/QH13 officially took effect. 	Non-VAT (input VAT is not deductible)	Negative
2017 - 2020	<ul style="list-style-type: none"> • Jan2017: Ministry of Industry and Trade proposes to Prime Minister to change VAT Law. • Aug2017: Ministry of Finance publishes the draft revised Tax Law for comments. • Jun2018: Ministry of Finance responded to voters about VAT Law amendment: fertilizers will be classified as output VAT of 5%. • Nov2018: The 6th session of National Assembly, draft amendments to 6 Tax Laws were submitted to National Assembly, but not yet approved. • Oct 28, 2020: Prime Minister signs to promulgate Resolution No. 159/NQ-CP approving the VAT on fertilizers project's dossier to submit to the National Assembly • Nov2020: Session 10 - QH14, National Assembly has not passed this Resolution. 	Change from Non-VAT to 5% tax rate	Negative
Forecast 2021 – 2022	Resolution on VAT on fertilizers is likely to continue to be submitted to the National Assembly in next sessions.	VAT rate: 5% (input VAT deductible)	Positive

Since 2015, VAT on fertilizers has been changed from 5% to non-VAT under Law 71/2014/QH13, creating difficulties for domestic fertilizer producers.

On October 28, 2020, the Prime Minister signed to promulgate Resolution No.159/NQ-CP approving the VAT on fertilizers project's dossier to submit to the National Assembly ([Detailed submission and draft Resolution](#)). Accordingly, fertilizers can be changed from non-VAT to 5%. However, in November 2020 session, the National Assembly hasn't passed the Resolution because it is argued that change of VAT on fertilizers to 5% will cause more difficulties for farmers when COVID-19 pandemic hasn't been extinguished. Domestic fertilizer enterprises continue to have to charge input VAT on their production costs. We believe that the Resolution on VAT on fertilizers is likely to continue to be submitted to the National Assembly in 2021 next sessions.

C. FERTILIZER INDUSTRY'S WATCH LIST
Update business results of some listed fertilizer companies
(Unit: Bil. VND)

Ticker	Revenue		Gross profit		Net Income		Gross profit margin		Net Income margin	
	9M2020	%yoy	9M2020	%yoy	9M2020	%yoy	9M2020	9M2019	9M2020	9M2019
DPM	5,831.8	+8.0%	1,342.5	+58.9%	597.1	+293.3%	23.0%	15.7%	10.2%	2.8%
DCM	5,294.9	+7.3%	873.9	+32.7%	462.0	+49.9%	16.5%	13.3%	8.7%	6.2%
BFC	3,944.3	-13.3%	575.2	+13.5%	120.5	+117.1%	14.6%	11.1%	3.1%	1.2%
LAS	1,565.6	-22.2%	280.9	-26.4%	-4.7	-133.6%	17.9%	19.0%	-0.3%	0.7%
SFG	1,100.8	-16.4%	85.7	-5.4%	2.9	+91.4%	7.8%	6.9%	0.3%	0.1%
VAF	596.6	-7.7%	136.2	-3.5%	15.5	+8.9%	22.8%	21.8%	2.6%	2.2%
NFC	333.2	-14.9%	48.1	-18.3%	7.7	-16.9%	14.5%	15.0%	2.3%	2.4%
DDV	1,176.2	+5.3%	119.0	-12.8%	-40.4	-1,596.3%	10.1%	12.2%	-3.4%	0.2%
QBS	262.7	-78.8%	1.14	-95.3%	-65.5	+43.0%	0.4%	1.9%	-24.9%	-9.3%
DHB	2,046.2	-4.4%	-239.3	-188.5%	-1,077.3	-155.8%	-11.7%	12.6%	-52.6%	-19.7%

Sources: Financial statements of companies, FPTs Research

Most of business results of leading fertilizer companies have grown strongly in 09M2020 due to the benefits of domestic and international industry factors.

The two leading companies DPM and DCM benefit directly from global fuel oil price movements in 2020. Due to the impact of Covid-19 pandemic, the world fuel demand plunges, causing crude oil prices to plunge in Aug - June and recovered slightly in the second half of the year. Input natural gas prices of DPM and DCM are anchored to global fuel oil prices, so gross profit margin of these two companies increased sharply in 09M2020. In addition, enterprise internal factors also contribute to boost Urea sales in domestic market (for DPM, +8.0% yoy), maintain domestic market share and push exporting granular Urea (for DCM, +7.3% yoy).

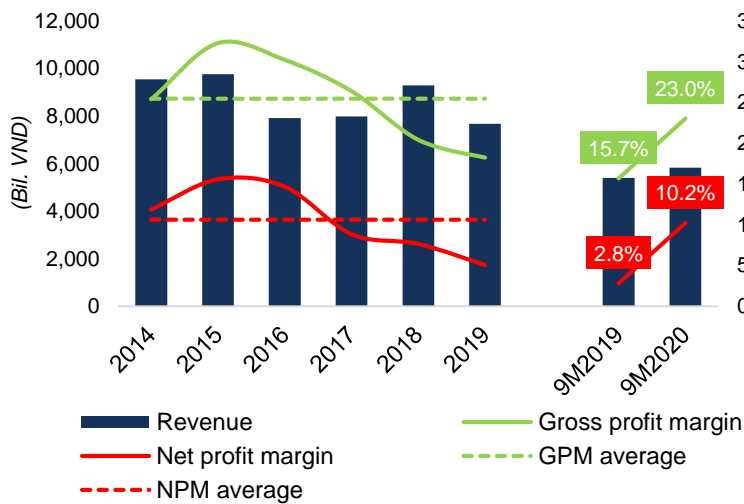
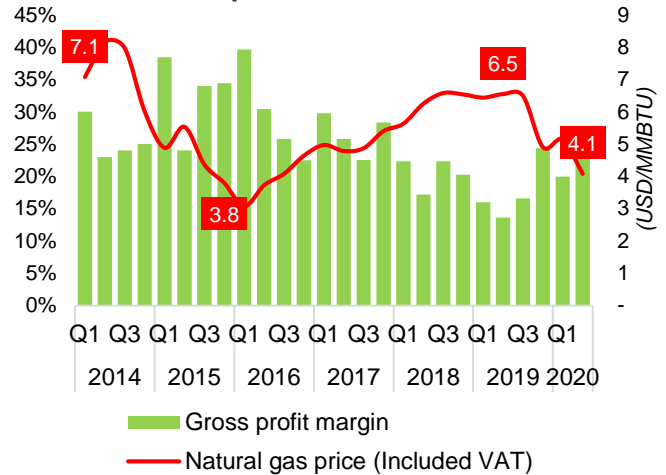
BFC is an enterprise that indirectly benefits through reduction of single fertilizer prices in 2020. As analyzed above, single fertilizer prices in 2020 plummet due to oversupply pressure, while domestic NPK fertilizer price was stable during the year. BFC's gross profit margin has also been significantly improved, resulting in outstanding business profit growth. However, fierce competition in the NPK segment due to entry of large competitors such as DPM and DCM has made BFC's NPK sales decrease by 13.3% in 2020.

For LAS, poor business situation along with fixed costs that cannot be reduced, eroded profits in 09M2020. Due to low product quality, LAS faces many difficulties in competing with high quality NPK products as more and more competitors participate in NPK segment in the North - the main market of LAS. Along with that, the inability to reduce selling and administrative expenses eroded the operating profit of this company, making after-tax profit negative (-4.7 billion dong) in 09M2020.

Most of the other companies in fertilizer industry face difficulties when domestic market is oversupply and fierce competition with imported products. Along with that, the VAT policy on fertilizers has not been changed, which also reduced competitive advantage of domestic producers in the past few years.

1. DPM – Outstanding growth thanks to benefit from fuel oil price movements, Urea plant operates stably
PetroVietnam Fertilizer and Chemicals Corporation - JSC (HSX: DPM) – Dec 28, 2020

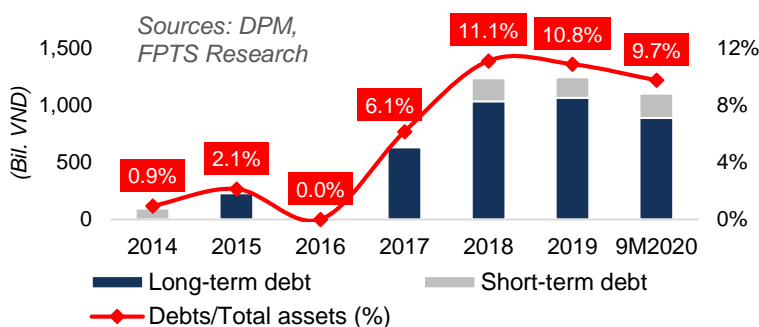
Market price (VND/share)	18,700	30-day average volume (shares)	3,403,978
52-week high (VND/share)	19,550	LTM EPS trailing (VND/share)	1,515
52-week low (VND/share)	11,050	LTM P/E trailing	12.3x

DPM's revenue and profit margins in 2014 - 2020

Gross profit margin and natural gas price movements


Sources: DPM, Bloomberg, FPTS Research

In 09M2020, DPM's net revenue increased by +8.0% over the same period in 2019, mainly due to a sharp increase in fertilizer consumption (+29% yoy including Urea and NPK). While average domestic Urea price in 2020 decreases by 13.4% compared to 2019 according to input gas price, increasing competitive advantage in price over imported Urea products. Along with that, in 2020, Phu My Urea Plant operates stably, exceeding capacity after ~80 days technical troubleshooting and overall maintenance period in 2019, causing production and consumption to increase sharply.

DPM's gross profit and net profit margins increased sharply in 09M2020 due to benefit from global fuel oil price movements. In April 2020, natural gas sales agreement between PVGAS and DPM was approved. According to contract formula, natural gas price of DPM fluctuates in line with global fuel oil price. In 2020, energy prices plummet, causing natural gas price of DPM to decrease. With natural gas cost accounting for ~80% of raw material costs, DPM's profit margins also improved significantly in 09M2020.

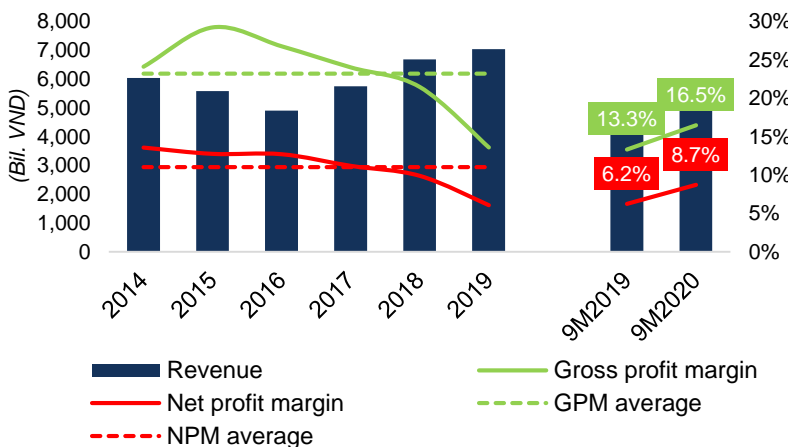
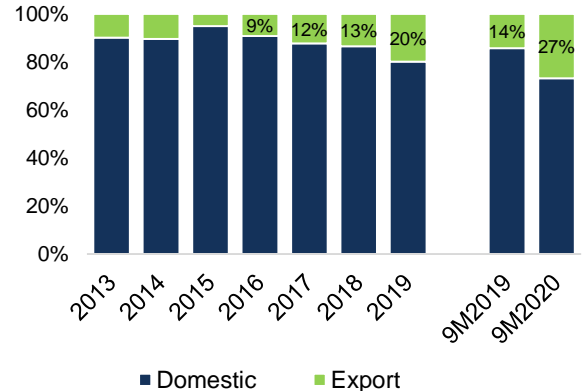
Debt structure and ratio of debt/total assets


DPM uses financial leverage among the lowest among listed fertilizer companies. From 2017, DPM started to invest in NH₃ - NPK project, using 70% of long-term loans, proportion of debt to total assets gradually increased to 11.1% in 2018. After completing the project DPM actively pays off loans, ratio of debt/total assets is only 9.6% at the end of Q3.2020, much lower than average of fertilizer companies (ratio of debt/total assets average ~22.5%).

Compared to other fertilizer companies, DPM has the lowest number of days receivable. DPM's receivable days increased slightly but not significantly, showing good revenue quality and high bargaining power with customers. In addition, DPM may face the risk of losing capital from investments in associates, especially Vietnam Petrochemical and Fiber JSC (VNPOLY) due to its unprofitable business situation.

2. DCM – Maintain market share in the Southwest, to be the leader in Urea export to Asia
PetroVietnam Ca Mau Fertilizer JSC (HSX: DCM) – Dec 28, 2020

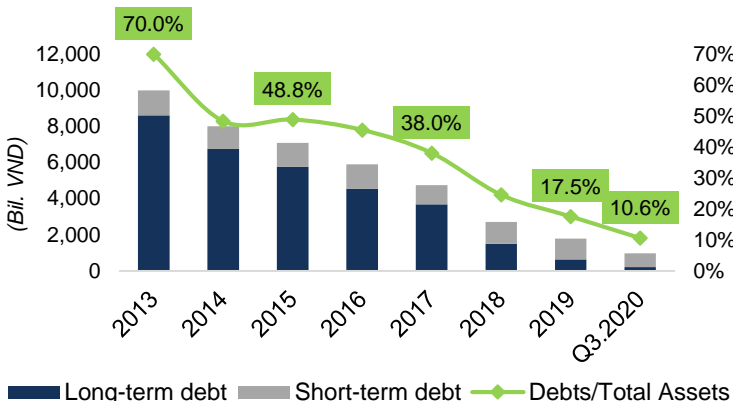
Market price (VND/share)	13,800	30-day average volume (shares)	4,036,122
52-week high (VND/share)	13,800	LTM EPS trailing (VND/share)	1,101
52-week low (VND/share)	5,290	LTM P/E trailing	12.5x

DCM's revenue and profit margins in 2014 - 2020

Urea revenue structure by market


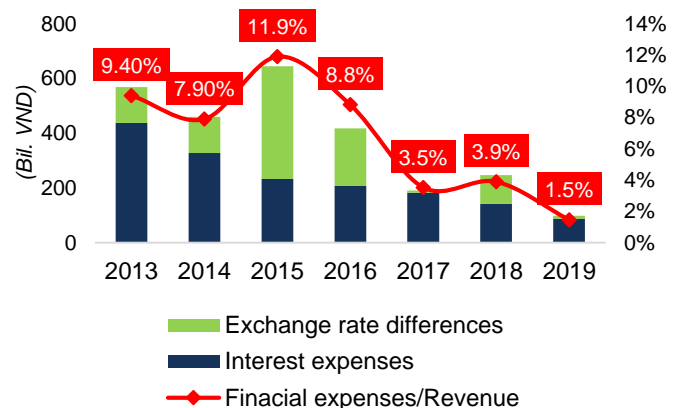
Sources: DCM, FPTs Research

DCM is the business with outstanding revenue growth rate compared to the industry in 2016 - 2019. DCM's net revenue grew by +12.8% per year from 2016 to 7,043 billion VND in 2019. In 09M2020, DCM's revenue will continue to grow +7.3% yoy due to: (1) *Export strategy towards potential markets such as Cambodia, India, Sri Lanka, ...* (2) *Diversification of fertilizers from imported distribution channel.* This strategy is quite suitable in the period of saturation and fierce competition in the domestic market.

DCM's gross profit margin is greatly influenced by input gas price and fixed asset depreciation expense. In 9M2020, input gas price anchored to fuel oil prices fell sharply, gross profit margin improved significantly but was still lower than DPM, because Ca Mau Fertilizer Plant still depreciated significantly while DPM has been fully depreciated.

Debt structure and ratio of debt/total assets


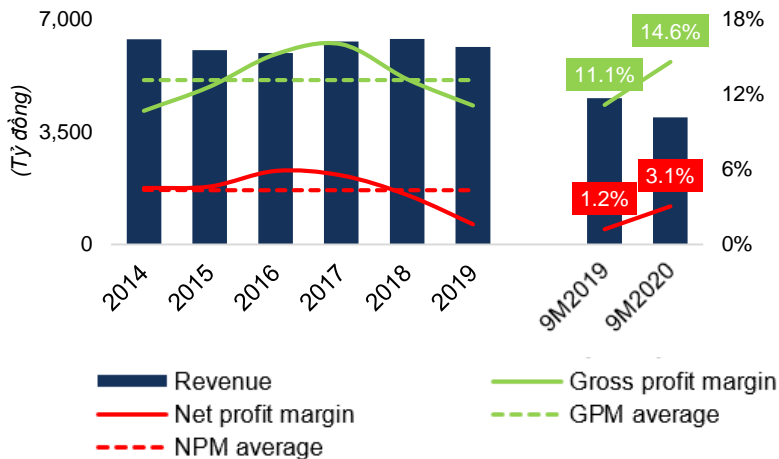
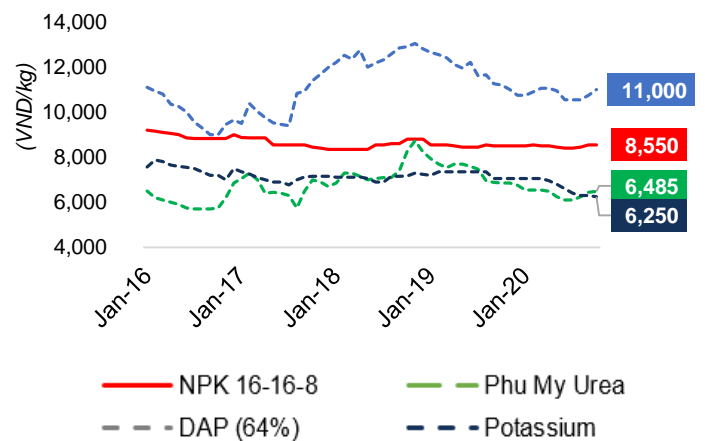
Sources: DCM, FPTs Research

Financial expenses over the years


After 7 years of repayment, proportion of interest-bearing loans of DCM has decreased significantly since 2013. With effective production and business activities, DCM brings stable cash flow to ensure repayment of principal and interest arising annually. Interest expenses decreased steadily over the years with high ability to repay and pay interest. DCM plans to pay off all loans to finance Ca Mau Fertilizer Plant by 2021, accordingly, interest expenses will also decrease sharply, facilitating the increase in business performance of DCM.

3. BFC – Benefiting from domestic fertilizer price movements in the short term
Binh Dien Fertilizer JSC (HSX: BFC) – Dec 28, 2020

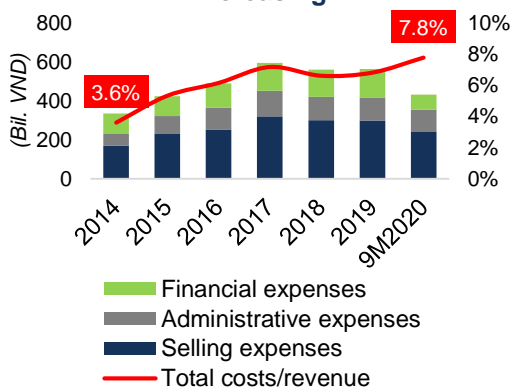
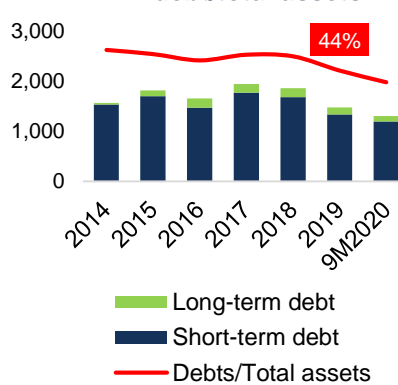
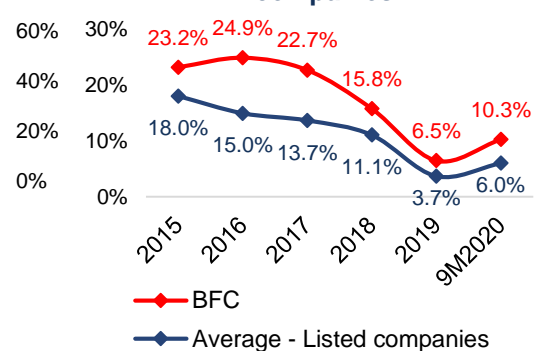
Market price (VND/share)	16,450	30-day average volume (shares)	562,691
52-week high (VND/share)	17,400	LTM EPS trailing (VND/share)	2,095
52-week low (VND/share)	9,990	LTM P/E trailing	7.9x

BFC's revenue and profit margins in 2014 - 2020

Domestic NPK and single fertilizer price movements


Sources: BFC, AgroMonitor, FPTs Research

BFC's revenue tends to go sideways in 2014 - 2019, while profit margins fluctuate strongly according to single fertilizers price movements. In 09M2020, domestic NPK fertilizer price was stable while single fertilizers prices such as DAP, Urea, and Potassium all fell sharply, BFC produced NPK fertilizers from three types of fertilizers, so it benefited greatly. BFC's gross profit margin in 09M2020 improved markedly, up from 11.1% to 14.6%.

However, BFC's net profit margin tends to recover more slowly than gross profit margin due to increasing proportion of fixed expenses/revenue, especially selling expenses. It can be seen that competitive NPK market is getting more and more fierce when big competitors participate in high-quality NPK segment.

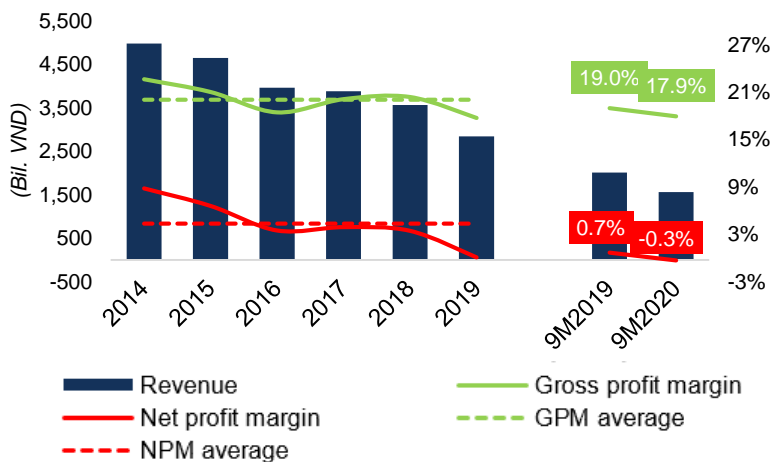
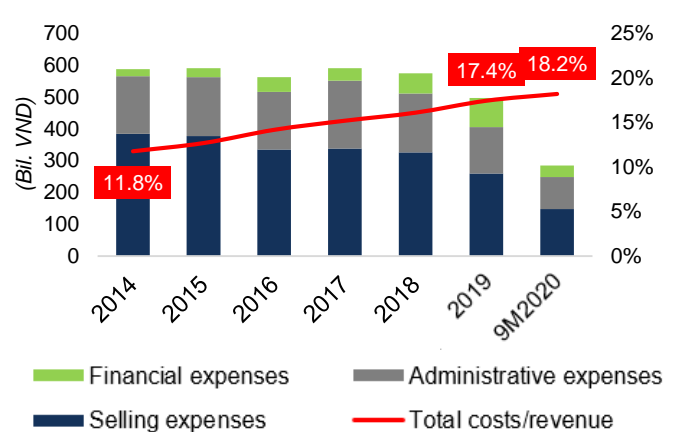
Proportion of costs is increasing

Debt structure and ratio of debt/total assets

ROE of listed fertilizer companies


Sources: BFC, FPTs Research

BFC is the business using the highest financial leverage among listed fertilizer companies. BFC's debt of more than 90% is short-term debt and tends to decrease slightly, mainly to offset working capital for production and business during the year. Rate of return on equity (ROE) of BFC is the highest among the listed fertilizer companies due to its high and efficient use of financial leverage. ROE tended to decrease in 2016 - 2019 due to the increase in raw material prices, resulting in a sharp drop in profitability. In 09M2020, BFC's ROE as well as industry average tended to increase again when there were positive supportive factors.

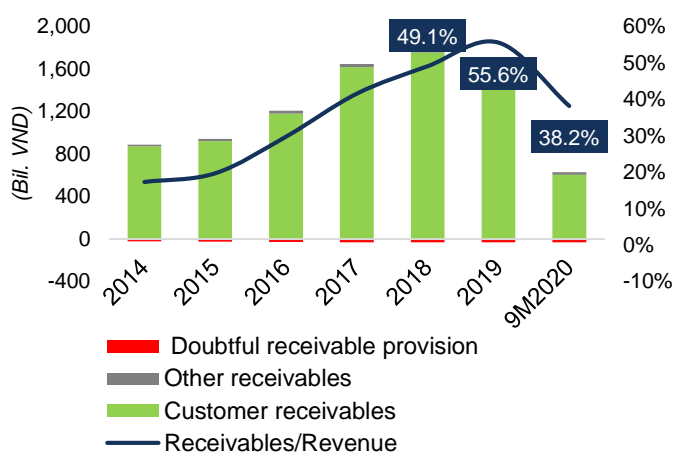
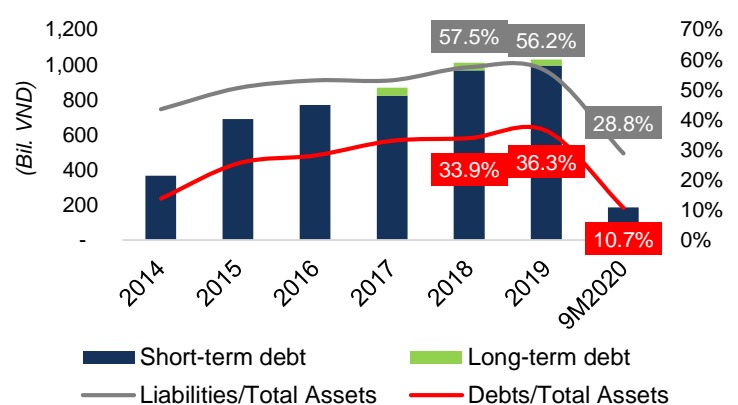
4. LAS – Poor competitive advantage in NPK segment, fixed costs corrode profits
Lam Thao Supe Phosphate and Chemical JSC (HNX: LAS) - 28/12/2020

Market price (VND/share)	7,900	30-day average volume (shares)	421,026
52-week high (VND/share)	8,700	LTM EPS trailing (VND/share)	-162
52-week low (VND/share)	4,900	LTM P/E trailing	N.A

LAS's revenue and profit margins in 2014 - 2020

Proportion of costs is increasing


Sources: LAS, FPTs Research

LAS's business results tend to decline sharply from 2014 to 2020. LAS's products are mainly NPK and phosphate fertilizers. While domestic market is saturated, major competitors enter NPK segment, along with that, LAS's products don't have competitive advantage in quality, making LAS's business more and more difficult. Decline in gross profit along with increasing proportions of selling, administrative and financial expenses over the years, causing LAS's net profit to be worn out. In 9M2020, LAS recorded a negative after-tax profit (-4.7 billion dong) for the first time during its business operation.

LAS's receivables

Debt structure and ratio of debt/total assets


Sources: LAS, FPTs Research

LAS's revenue and profit quality is not really good. Receivables mainly from customers increased sharply over the years, making proportion of receivables to revenue reached a record 55.6% in 2019. In 9M.2020, this proportion has decreased significantly, however, it is necessary to consider receivables arising in the last quarter of the year to further assess revenue quality in 2020.

In terms of capital structure, most of capital is financed from debt, of which more than 90% is short-term debt, to finance working capital during the year. In 9M2020, debts/total assets ratio dropped sharply to only 10.7%.

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