



## DEVELOPMENT STRATEGY

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**CREATING SOLUTIONS  
THRIVING AGRICULTURE**



# OVERVIEW OF FERTILIZER INDUSTRY 2023

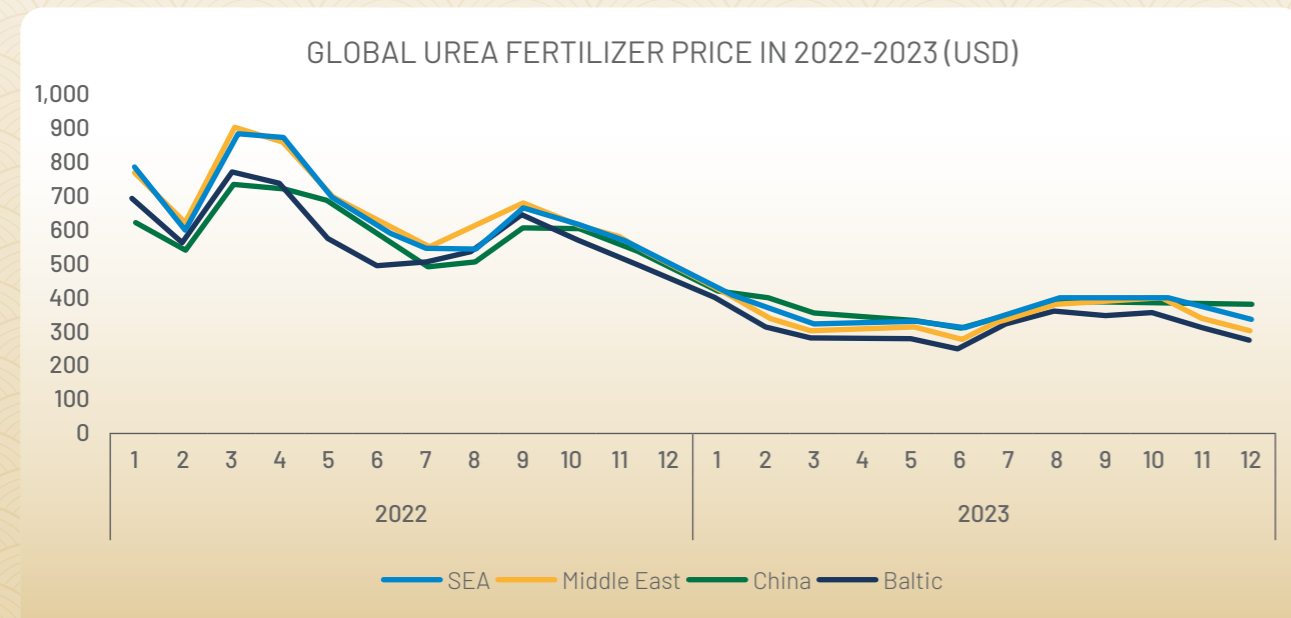
## GLOBAL FERTILIZER MARKET

### UREA MARKET

2023 marked a significant year of global urea market reaching approximately 190.4 million tons, up 4.1% as of 2022, the highest design capacity in 14 years. However, urea output was only slightly increased approximately 1% compared to previous year with a capacity of 157.9 million tons. The rise mainly came from the Asia region (China, Brunei, Indonesia, and India); Europe (Russia and Ukraine). In the meanwhile, some other regions such as West Asia and America witnessed a decline in output.

Especially, India and Bangladesh saw a start of new urea plants: India expects to put into operation six new urea plants with a capacity of 1.3 million tons per each year; Bangladesh has launched Southeast Asia's largest urea plant with a capacity of 924,000 tons/year. China has put into operation 3 new urea plants since October 2023. Brunei and Indonesia recorded strong growth. Meanwhile, the Middle East excluding Egypt, saw a decline in production in Iran and Saudi Arabia. Europe, especially Russia and Ukraine, also witnessed a urea output growth thanks to recovery of manufacturing of urea plants after a period of difficulty due to high gas prices in previous year.

Global opaque granular Urea fertilizer price trend and forecast



(Source: Fertecon)



GLOBAL UREA OUTPUT REACHED

157.9

MILLION TONS

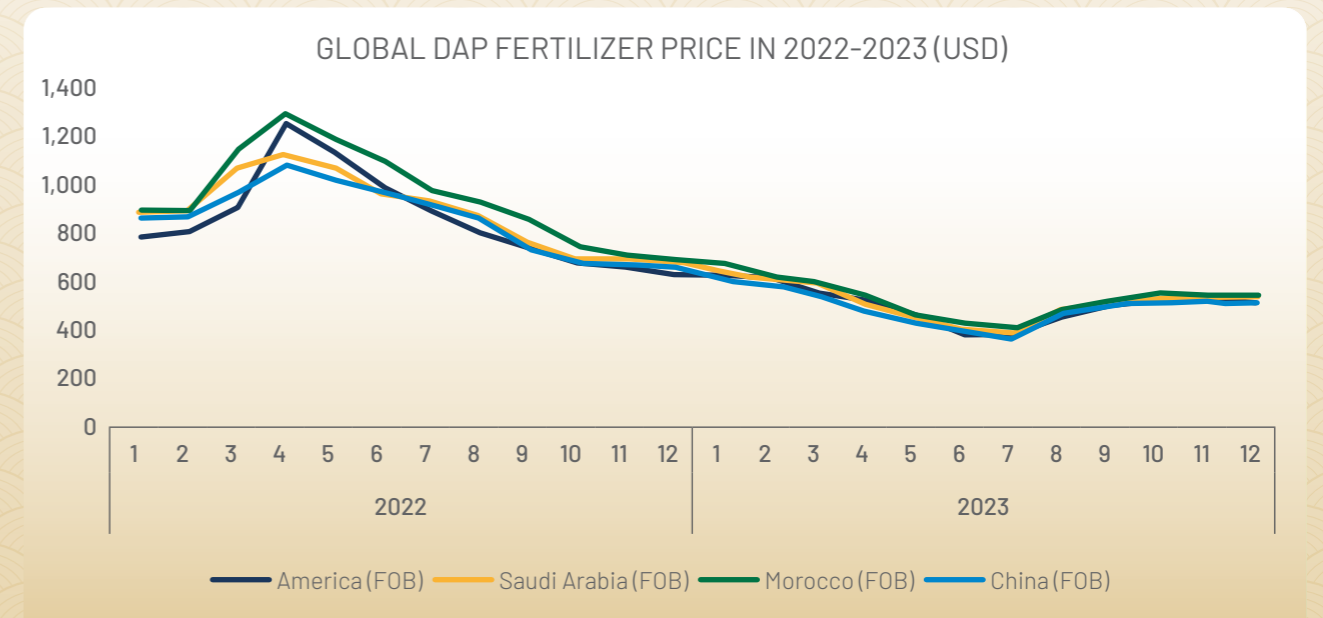
1% COMPARED TO 2022



### PHOSPHATE MARKET

In 2023, global phosphate production capacity was forecast to reach 63.6 million tons of P<sub>2</sub>O<sub>5</sub>, up 3% as of previous year. The actual output was forecast to rise by 3% reaching 52.7 million tons of P<sub>2</sub>O<sub>5</sub> thanks to recovery of manufacturing in Africa, South Asia and East Asia. By 2024, phosphate production capacity is forecasted to increase by 2% reaching 64.7 million tons of P<sub>2</sub>O<sub>5</sub> and actual output is expected to increase by 3% reaching 54.4 million tons of P<sub>2</sub>O<sub>5</sub>.

Global DAP fertilizer price trend and forecast



(Source: Argus)

GLOBAL P<sub>2</sub>O<sub>5</sub> OUTPUT REACHED

52.7

MILLION TONS

3% COMPARED TO 2022

# OVERVIEW OF FERTILIZER INDUSTRY 2023

## GLOBAL FERTILIZER MARKET

### POTASH MARKET

Global potash production capacity was forecast to reach 64.3 million tons in 2023, up 2% as of 2022. Actual output reached approximately 48.5 million tons, up 4% as of previous year due to an increase in supply from Lao PDR and Canada plus operation of new plants and improved operational capacity. However, the output of some plants in Russia and Belarus reduced due to impacts of Russia - Ukraine conflict and sanctions imposed by the US and EU.

Lao DPR, Thailand, Vietnam and Canada emerged as spotlights in potash development and production expansion. Lao DPR has restarted producing MOP, Thailand has revived its potash mining product, Vietnam has planned to boost commercial production of MOP while Canada continued to pour capital into Jansen Potash project. However, Canada witnessed a production drop at Mosaic plant and closure of Potash mine due to high inventory. The U.S.A is expected to boost Potash sales. Belarus and Russia saw a decline in output due to sanctions and conflicts.

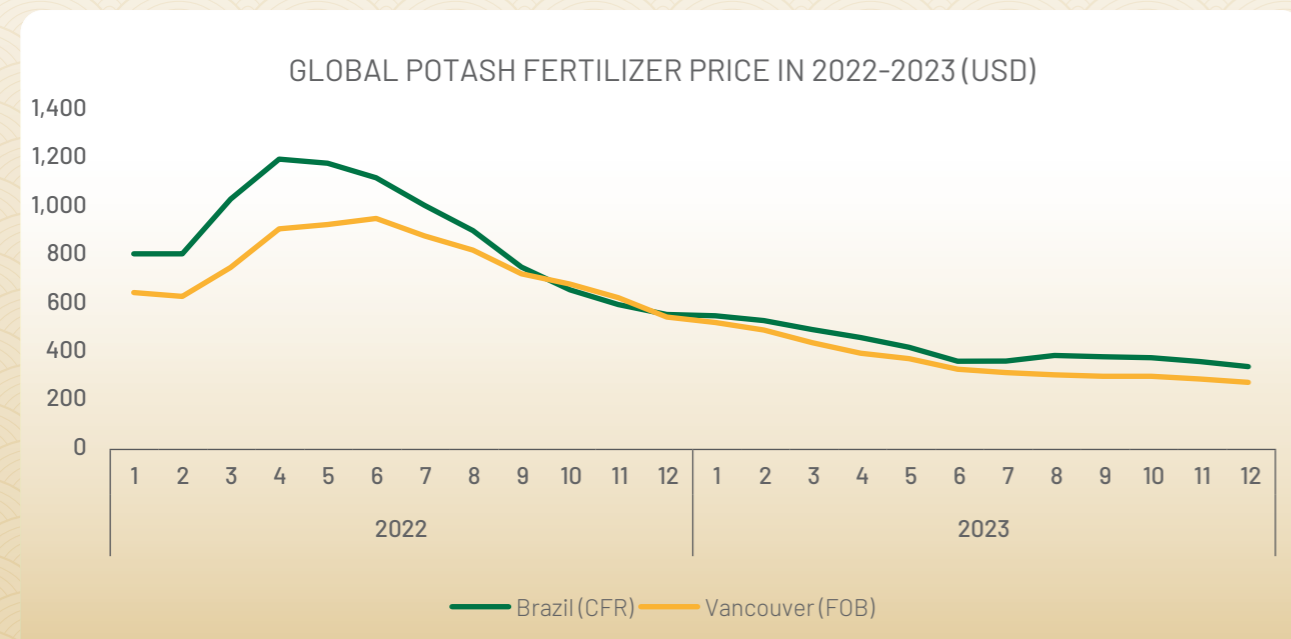
### GLOBAL POTASH OUTPUT REACHED

48.5

MILLION TONS

▲ 4% COMPARED TO 2022

Global potash fertilizer price trend and forecast



(Source: Argus)

### NPK FERTILIZER MARKET

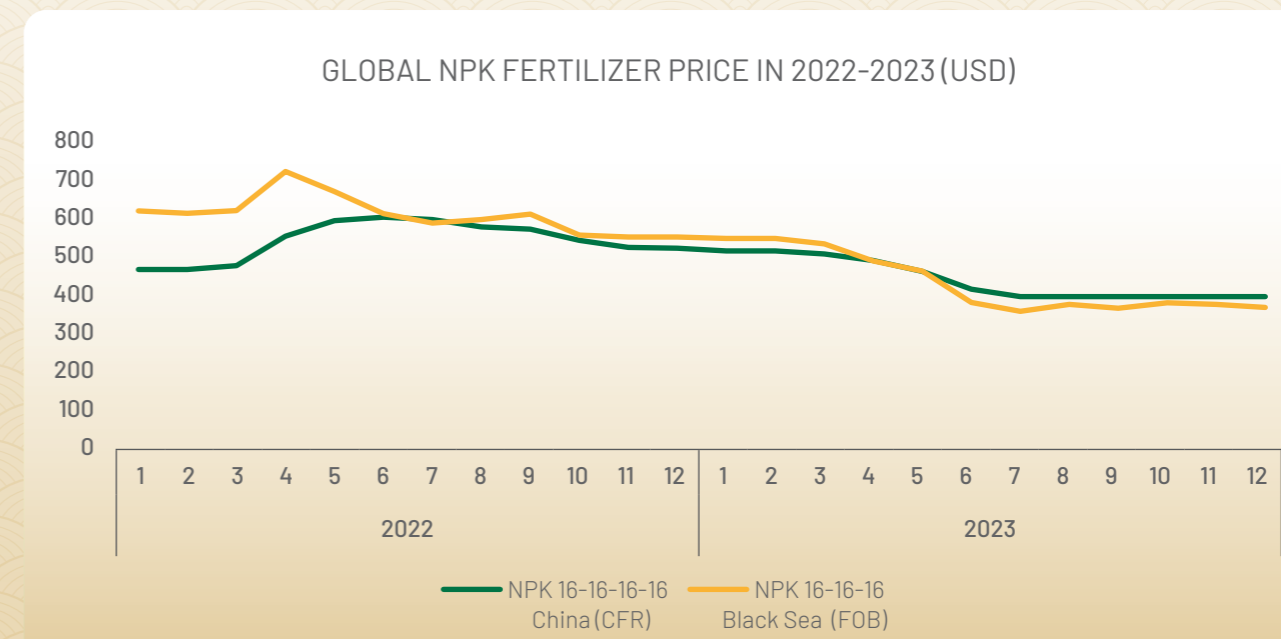
Global NPK fertilizer price saw a significant decrease from January to July 2023 due to buyers' limited participation because they were uncertain about price trends, high inventory and a drop in single fertilize price. From August to December 2023, NPK fertilizer price slightly inched back in almost markets due to rising material price and high demand. This led to price of NPK 16-16-16 fertilizer in Southeast Asia dropped by 27% down to 522 USD/ton, NPK 15-15-15 fertilizer price in China dropped by 22% down to 554 USD/ton while the fertilizer price in Morocco falling by 32% down to 506 USD/ton.

In the first half of 2023, NPK fertilizer market turned its eyes to large bidders in India, many tenders failed because buyers did not accept

the price. From January to July, the price of NPK 16-16-16 fertilizers in Southeast Asia fell by 31%, the price of NPK 10-26-26 fertilizer dropped by 32% in India. From January to July saw a limited supply due to export restrictions placed by Russia and China.

However, from August to December, the price of NPK fertilizer inched back due to high demand and rising material price. Especially, the demand in India, Southeast Asia and Europe increased. In the meanwhile, the supply from China decreased due to export restrictions plus limited supply from Russia. In December, the price of NPK 15-15-15 fertilizer in China rose by 3% up to 492 USD/ton, price of NPK 16-16-16 fertilizer in Southeast Asia rose by 7% up to 490 USD/ton.

Global NPK fertilizer price trend and forecast



(Source: Argus)

# OVERVIEW OF FERTILIZER INDUSTRY 2023

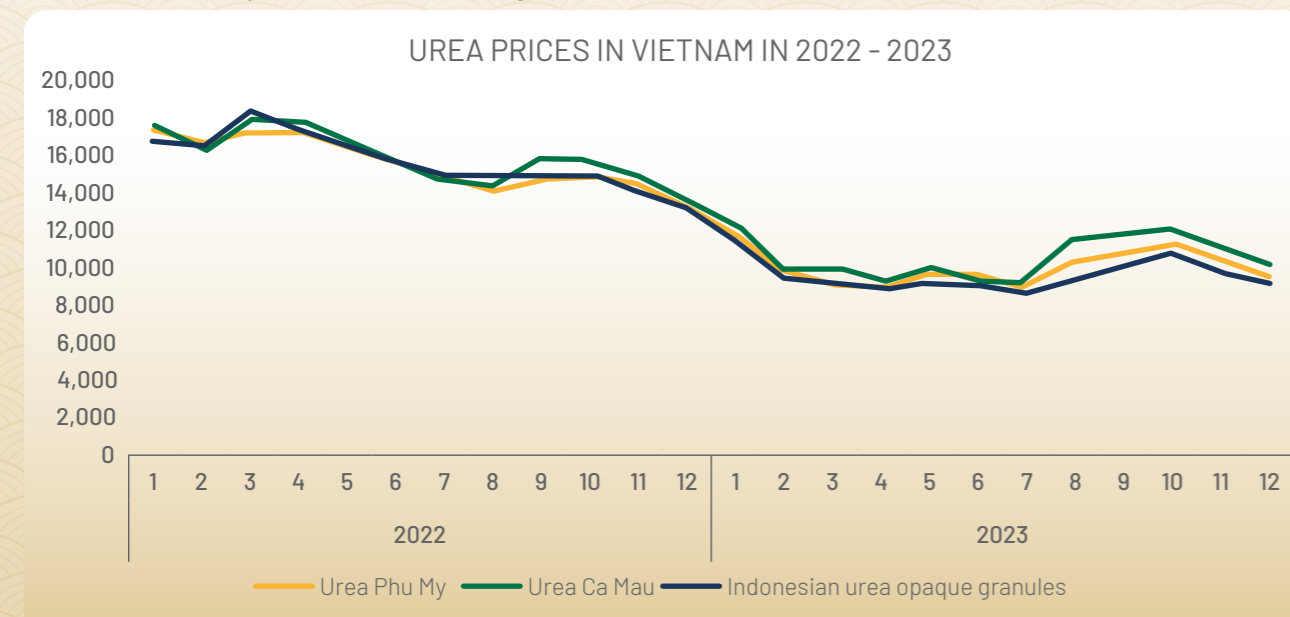
## VIETNAM FERTILIZER MARKET

### UREA MARKET

According to AgroMonitor, Vietnam urea market saw an increase in supply and a slight decrease in total demand in 2023 causing a pressure on urea price. A decrease in global urea price in the first half of 2023 had impacts on consumer sentiment, most transactions were small scale due to caution from distributors. Total domestic and import supply combined with inventories were estimated at 2.95 million tons, up 2.35% as of previous year. Imported products increased significantly as an offsetting for a light decrease in production. Weak demand due to a sharp drop in export while domestic consumption slightly recovered in general.

Amount of urea inventories was higher than that of two previous years with an average inventory amount of over 400,000 tons compared to 300,000 tons in 2022 and 220,000 tons in 2021. The highest level of inventories was recorded in the last two months of 2023 because manufacturers and traders prepared products for the Winter-Spring crop. However, the Winter-Spring crop in 2023 was one month delayed compared to previous years, there was a supply surplus in the last two months causing a drop in urea price since a slight recovery recorded from August to October 2023.

Domestic UREA prices (Unit: VND/kg)



**TOTAL DOMESTIC AND IMPORT SUPPLY COMBINED WITH INVENTORIES WERE ESTIMATED AT**

**2.95**

MILLION TONS

**▲ 2.35% AS OF PREVIOUS YEAR**

(Source: AgroMonitor)

### DAP MARKET

According to AgroMonitor, 2023 saw an increase in both supply and demand of DAP in Vietnam compared to 2022. Total supply reached 953,000 tons, up 241,000 tons, imported products increased by 25% up to 438,000 tons, products imported from China rose by 97%. Domestic production also increased by 7.5%, lower than 2020-2021 due to scarcity of apatite ore.

Total demand of DAP in 2023 was estimated at 710,000 tons, up 150,000 tons, and exports rose by 50% up to 180,000 tons. Domestic consumption serving production and crop cultivation also increased.

However, due to excess supply, inventory increased by 59% at the end of 2023, inventory in the first 7 months of 2023 maintained at 99,000-152,000 tons and rose to 170,000-250,000 tons in the last 5 months due to an increase in import.

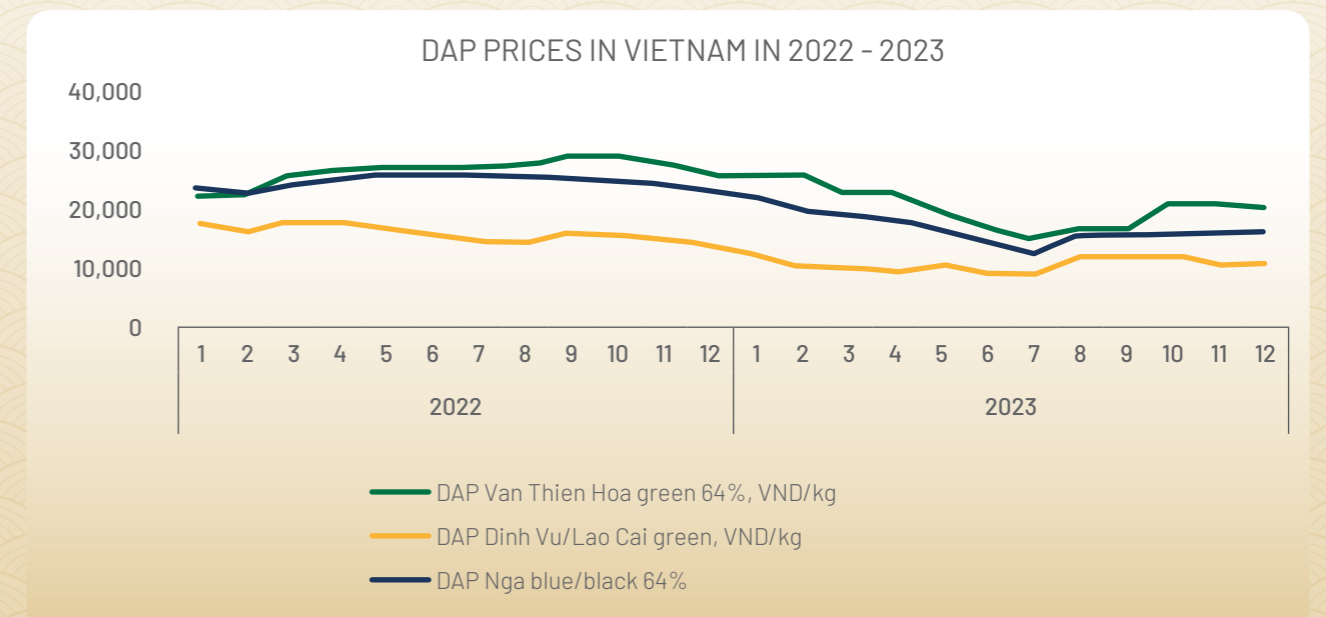
**TOTAL SUPPLY IN VIETNAM REACHED**

**953**

THOUSAND TONS

**▲ 241 THOUSAND TONS COMPARED TO 2022**

Domestic DAP prices (Unit: VND/kg)



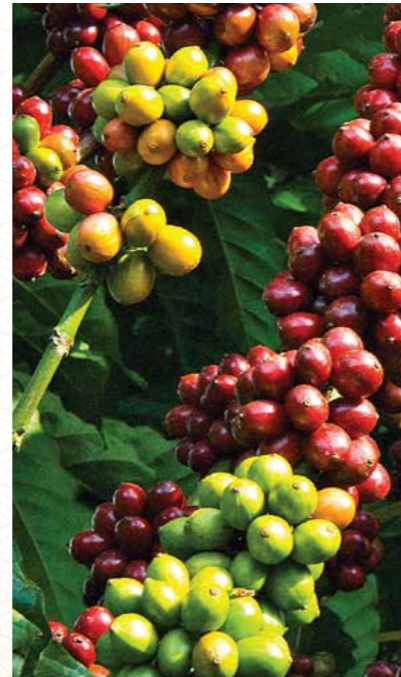
(Source: AgroMonitor)

# OVERVIEW OF FERTILIZER INDUSTRY 2023

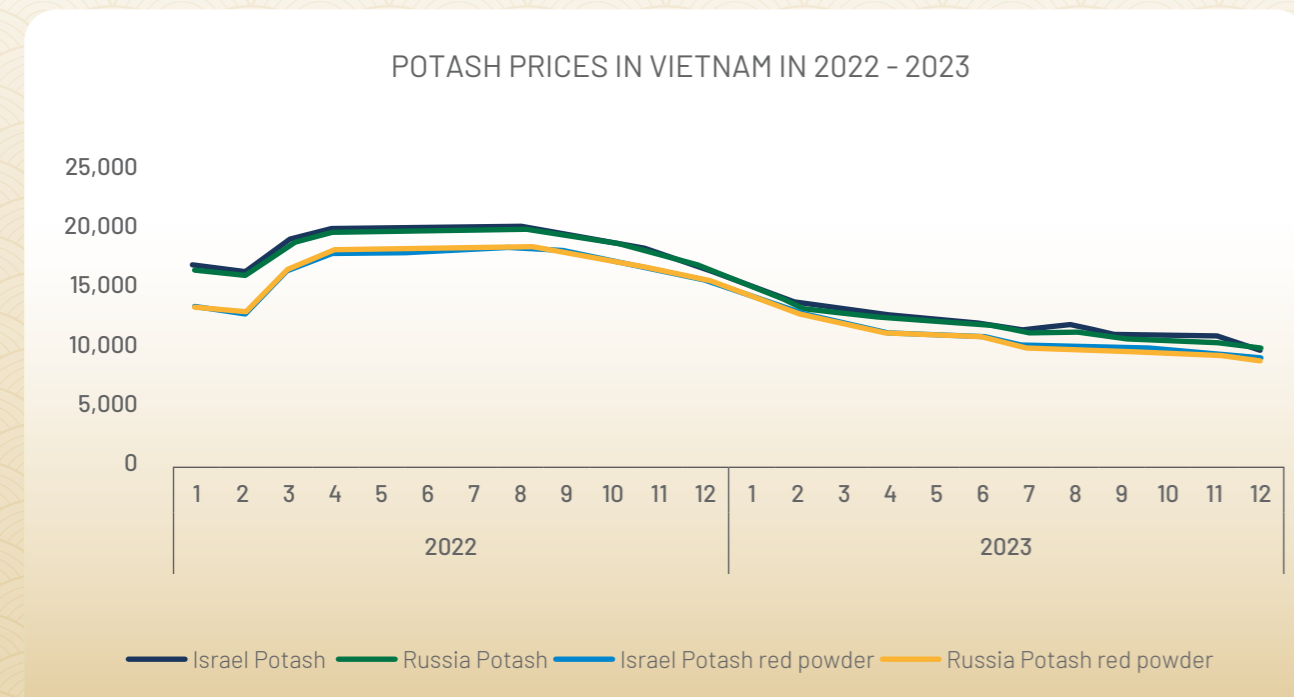
## VIETNAM FERTILIZER MARKET

### POTASH MARKET

According to AgroMonitor, Potash price in Vietnam 2023 dropped continuously but not returned to pre-crisis level in February 2021. Urea and DAP prices were almost equal to that level in June-July 2023. Potash transactions were quiet due to risks of falling price leading to limited purchase of distributors. Potash consumption for crops slightly increased by 5% while NPK consumption decreased by 15%. Total Potash demand fell by 17.3% compared to previous year, total supply also dropped by 3.8% mainly due to low inventories at the beginning of the year despite an increase of 25% in import in the last 5 months. The first 7 months of 2023 saw a decrease in potash inventories due to release of inventory at high price plus limited import. From August to October saw a gradual increase and reached the highest level of 252,000 tons at the end of October and maintained at 228,000-238,000 tons in November and December.



Domestic Potash prices (Unit: VND/kg)



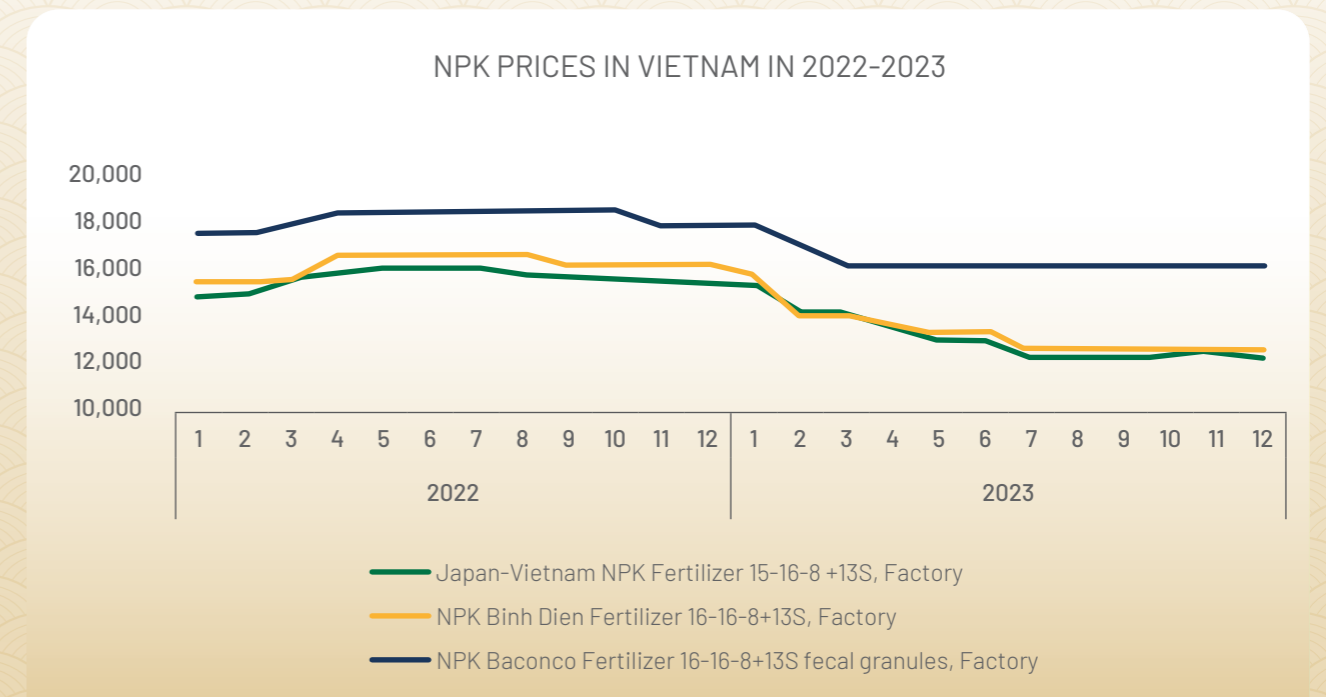
(Source: AgroMonitor)

### NPK MARKET

According to AgroMonitor, the Vietnamese NPK market saw a fluctuation in both supply and demand in 2023. Inventories decreased by 16% as of early 2022 with a capacity of 279,000 tons. Total NPK fertilizer production output enjoyed a slight increase of 1.36% to 2.63 million tons despite impacts of a decline in single fertilizer price faster than that of mixed fertilizers, this led to partial recovery of NPK fertilizer consumption. Production capacity of plants under Chemical Group dropped by 7% down to 1.05 million tons, other plants enjoyed an increase of 7.8% up to 1.58 million tons.

Imported NPK fertilizers significantly increased by 46.7% up to 548,000 tons, imported NPK fertilizers from China and Russia increased by 43% and 86% respectively. Average import price decreased compared to 2022 leading to high import output. Specifically, the imported NPK price from Russia was 508 USD/ton and 524 USD/ton from China, despite a decline in price compared to 2022 but still higher than that of 2021.

Domestic NPK prices (Unit: VND/kg)



**TOTAL DOMESTIC NPK FERTILIZER PRODUCTION OUTPUT**

**2.63**  
MILLION TONS

**▲ 1.36%**  
COMPARED TO 2022

(Source: AgroMonitor)

# PROSPECTS FOR FERTILIZER INDUSTRY IN 2024

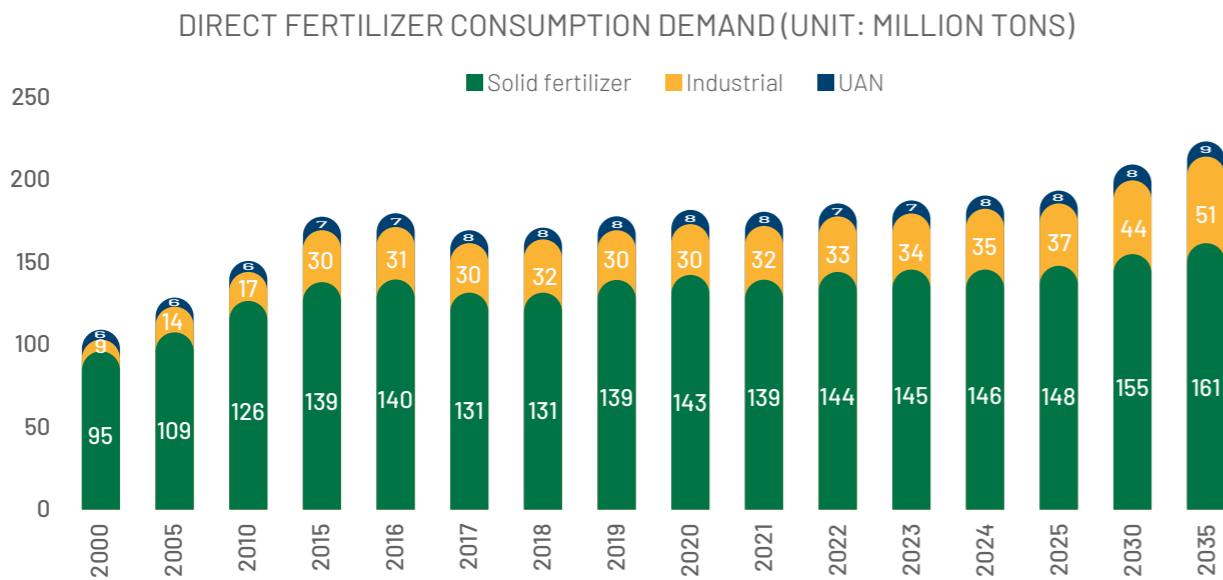


## WORLD FERTILIZER MARKET

### UREA MARKET

The global urea production capacity in 2024 is estimated to reach 237.232 million tons, continuing the upward trend compared to 2023.

Southeast Asia maintains a stable supply at 17.151 million tons. South Asia increases to 40.163 million tons; East Asia increases to 77.098 million tons, while Africa increases to 17.025 million tons.



(Source: Fertecon)

The global urea consumption demand in 2024 is estimated to reach 189 million tons, showing a slight increase compared to 2023, with approximately 146 million tons projected for direct fertilizer usage.

The forecasted annual growth in demand, estimated at around 2.2 million tons per year during the same period (including both fertilizers and industrial urea), is lower than the growth rate of supply (capacity), at approximately 6.3 million tons per year. This indicates a more intense competition in the future for the urea market.

Asia will remain the largest market for direct urea usage and is expected to dominate growth in total volume over the next two decades, albeit with a forecasted modest growth rate of only 0.7% per year, with the largest volume increase anticipated in South Asia. China's growth rate is slowing down due to market saturation coupled with government interventions.

A strong growth forecast is expected in Latin America and Africa, the regions with the most potential for agricultural development.

**EXPECTED CAPACITY OF WORLD UREA PLANTS IN 2024**

**237.2**

MILLION TONS

**EXPECTED CONSUMPTION DEMAND**

**189**

MILLION TONS



(Source: Mosaic)

# PROSPECTS FOR FERTILIZER INDUSTRY IN 2024

## WORLD DAP MARKET

The global demand for DAP in 2024 is forecasted to be around 73-76 million tons, showing a slight increase compared to last year due to the projected prospects of seasonal conditions and expanded agricultural cultivation areas worldwide. Furthermore, the continuous decrease in DAP prices has contributed to stimulating consumer demand for DAP, while the prices of some major agricultural products such as corn and soybeans remain attractive compared to DAP prices for farmers in key consumption markets.

Overall, the demand is expected to continue improving in major markets such as Brazil, Argentina, North America, and Asia, while consumption levels in India and China are somewhat slower compared to the rest of the world.

**FORECASTED GLOBAL DAP DEMAND IN 2024**  
**73-76**  
 MILLION TONS

## WORLD POTASH MARKET

Global potash consumption is expected to see significant improvement in 2024, reaching an estimated 68-72 million tons. Major consumer markets are maintaining their growth momentum, notably Latin America (15-16 million tons), China (14-16 million tons), North America (8.5-9.5 million tons), India (2.6-3.2 million tons), and other Asian countries (8.5-9.2 million tons), etc.

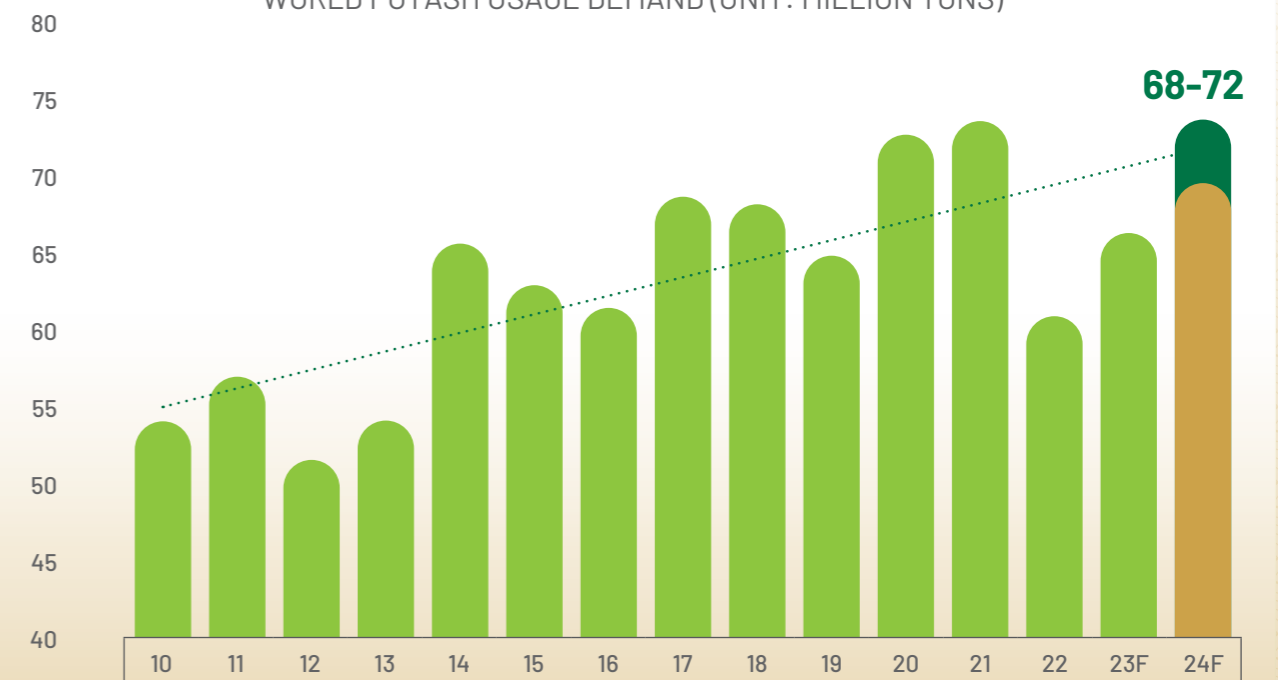
**FORECASTED GLOBAL POTASH DEMAND IN 2024**  
**68-72**  
 MILLION TONS

GLOBAL DAP USAGE DEMAND (UNIT: MILLION TONS)



(Source: Mosaic)

WORLD POTASH USAGE DEMAND (UNIT: MILLION TONS)



(Source: Mosaic)

# PROSPECTS FOR FERTILIZER INDUSTRY IN 2024

## DOMESTIC FERTILIZER MARKET

### VIETNAM UREA MARKET

In 2024, urea demand in Vietnam is forecasted to recover after facing two years of price turbulence. However, this growth is expected to be moderate due to high urea prices in the first half of 2023. AgroMonitor predicts domestic urea consumption in Vietnam in 2024 to be in the range of 2.05-2.11 million tons, an increase from 1.74-1.93 million tons in 2022-2023.

Vietnam's urea exports in 2024 are forecasted to see slight growth or stability compared to 2023, as global nitrogen supply is expected to increase. The Asian region is expected to witness increased

**FORECASTED DOMESTIC UREA CONSUMPTION IN 2024**

**2.05 - 2.11**  
MILLION TONS



production from new urea plants, particularly in India and Bangladesh, which could introduce additional competition for Vietnam, although the Cambodian market still holds export potential. Vietnam's urea exports in 2024 are estimated to be in the range of 550-570 thousand tons.

Domestic urea supply is projected to reach 2.2-2.4 million tons. Forecasted urea imports in 2024 are lower than in 2023, estimated at 200-250 thousand tons, reflecting a slowdown after a lively year and depending on competition from domestic production and pricing policies.

### VIETNAM DAP MARKET

In 2024, it is forecasted that DAP imports to Vietnam may increase compared to 2023, with the potential for a strong recovery in the latter half of the year due to factors such as China's export policies and developments in the Red Sea region. It is estimated that DAP imports will reach 440-460 thousand tons. China, being the largest supplier, is expected to limit exports in the first quarter but increase them after the spring season. Russia, another important source, will continue to impose export taxes, with shipping costs expected to rise due to tensions in the Red Sea. South Korea, although the third-largest market, still faces issues with high Cadmium content in the product.

**ESTIMATED DOMESTIC DAP PRODUCTION IN 2024**

**400 - 420**  
THOUSAND TONS

Regarding demand, the world DAP prices are expected to increase in the first quarter of 2024 but decrease thereafter, supporting domestic DAP consumption, particularly in the early second quarter as the Spring-Summer crop season begins. Global demand for P<sub>2</sub>O<sub>5</sub>-containing fertilizers is also expected to increase slightly, with increases anticipated in East Asia, South Asia, and West Asia. Domestic DAP consumption is projected to rise to 620-660 thousand tons, compared to 530 thousand tons in 2023.

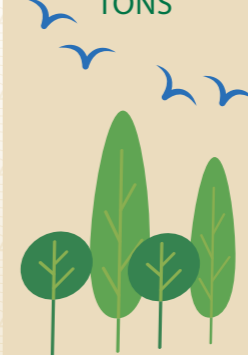
Domestic DAP production is expected to increase, with plants adjusting production according to supply demand dynamics and price trends. The estimated production volume is 400-420 thousand tons, an increase from 362 thousand tons in 2023.

### VIETNAM POTASH MARKET

The outlook for the potash supply in Vietnam in 2024 is expected to be influenced by global supply and potash pricing trends. The potash price is forecasted to stabilize after a downward trend from late 2023 to early 2024, moving closer to pre-energy crisis levels.

**EXPECTED POTASH CONSUMPTION IN 2024 FOR CROPS**

**250 - 300**  
THOUSAND TONS



AgroMonitor predicts that potash domestic consumption for crops and production materials will increase, with estimated consumption reaching 250-300 thousand tons for crops and 500-550 thousand tons for production materials.

### VIETNAM NPK FERTILIZER MARKET

In 2024, both consumption and production of NPK fertilizers in Vietnam are forecasted to increase. Consumption is expected to grow by 11-15% to reach 2.9-3 million tons, while production is projected to increase by 1-3% to reach 2.63-2.65 million tons. Specifically, production volumes of NPK Ca Mau and NPK Phu My are expected to rise.

Regarding imports, it is anticipated that they will either remain stable or experience a slight decrease compared to 2023, with the main sources being China and Russia. The forecast for NPK fertilizer imports in 2024 is 500-550 thousand tons, a reduction from 548 thousand tons in 2023, continuing the trend of product diversification and distribution of imported goods.

**THE FORECAST FOR NPK FERTILIZER IMPORTS IN 2024**

**500 - 550**  
THOUSAND TONS





# SWOT ANALYSIS



## MAINTAINING MARKET LEADERSHIP

During the past, PVCFC has been one of the leading enterprises in the Urea when positioning and leading the market in terms of market share, brand, selling policy and ability to adjust selling price.

PVCFC ensures that it can be able to compete with locally manufactured products, especially with imported products. Maintain a certain sale price gap compared to similar products, restrict involving in price wars in a negative manner because it reduces PVCFC's internal strength and detrimental to business.

By putting Ca Mau NPK Fertilizer Plant into operation, PVCFC has step by step shown its pioneering and leading role in affirming its position as Vietnam's leading fertilizer trading and production company and beyond across Southeast Asia.

## STRONG AND MARKET-COVERED TIER 1 AND TIER 2 DISTRIBUTION SYSTEM

Tier 1 and Tier 2 distribution system is strong and covers the market, especially the key markets in the Mekong Delta and Cambodia which creates a firm foundation for PVCFC to deploy its focus strategy, with selection and priority, for the purpose of optimizing revenue, selling price, and business efficiency. At present, more than two thirds of PVCFC's sales

volumes come from the Mekong Delta market, therefore, distribution planning plays an important part of PVCFC's business strategy.

## STREAMLINING SALES SYSTEM FOR COST SAVING

In the coming time, to further promote and optimize the distribution model, PVCFC continues to research and test new forms of distribution on the basis of ensuring harmonious interests of manufacturers - distributors - consumers. By strengthening application of IT into production, sales and distribution management, PVCFC considers it as one of the most important and effective tools that the company should own.

PVCFC always ensures a neat and well organized distribution system, prioritizing recruiting local sales team who has a deep understanding of the market, products and regional culture; upholding proactive, creative and dynamic role of management teams of all levels; encouraging motivating and building a results-oriented sales team, creating a fair sales compensation plan based on employees' efforts.

Above all, it is required to streamline the sales system with timely updating of market situation and competitor information to meet diverse needs and strict requirements of distribution system and consumers.

## GRADUALLY IMPROVING BUSINESS EFFICIENCY OF TANGIBLE ASSETS AND INCREASING INTANGIBLE ASSET VALUE

PVCFC always strives to ensure important goals for shareholders are being achieved; continuously improving financial indicators such as ROA, ROE, EPS, etc. In general, through working with financial institutions, foreign investment funds, PVCFC has received positive assessments on financial indicators and sales growth.

In the coming time, the Company strives to increase value of intangible assets such as brand, copyright, technology, invention and solutions throughout the value chain to enhance market value of assets.



## PRODUCTION COST IS STILL A RELATIVELY DISADVANTAGE COMPARED TO OTHER COUNTRIES

Due to many reasons, PVCFC's Urea production cost is still quite high as compared to some other countries. Production cost in some countries is less than 200 USD/ton because they have advantages in resources and less investment costs. Many of them are in the Middle East and Baltic region possessing abundant oil and gas resources and having a developed oil and gas industry.

In Asia, some plants in Indonesia, Malaysia and China, Brunei also have competitive and lower production costs than PVCFC's. Thus, PVCFC's competition in export markets sometimes faces certain disadvantages compared to competitors in the region.

## LOGISTIC COST OCCUPIES FOR A HIGH PROPORTION, LIMITING LONG-TERM COMPETITION

Logistics activities in supply chain and fertilizer distribution from Ca Mau Fertilizer Plant to many domestic markets are carried out by multi-modal transport leading to a remarkable cost arisen. This cannot be settled down early in the medium-term or long-term and depends on many intermediaries, thereby affecting PVCFC's product distribution to domestic consumers.

# SWOT ANALYSIS



## THE NATIONAL ASSEMBLY WILL PASS THE LAW ON VAT SOON

From 2014 until now, the VAT Law applies to fertilizer manufactures and trading units that are not imposed VAT. Thus PVCFC and many production and trading units in the industry bear a large input costs. It is estimated that the non-deductible input costs are from 500-700 billion VND per year. This makes it difficult for business and production activities in the context of severe competition domestically and internationally.

However, amendment proposals of Law on VAT have been submitted to the Government and the National Assembly for consideration to make fertilizers subject to VAT at a reasonable level, creating favorable conditions for domestic fertilizer manufacturers.

According to experts, Law on VAT is drawing a special attention and support from the National Assembly, Ministries and related agencies, it can be passed soon in the next sessions. If feasible, this can be a big opportunity for domestic fertilizer manufacturers, creating favorable conditions for reducing input costs, reducing product price, improving production efficiency and boosting domestic consumption.

## WELL EXPLOITING OPPORTUNITY FROM FERTILIZERS FOR RICE AND FRUIT TREES IN MEKONG DELTA

Mekong Delta is the largest fertilizer consumption market in Vietnam with the demand from farmers on Urea from 680,000 to 720,000 tons/year, DAP from 360,000 to 390,000 tons/year, Potassium from 220,000 to 260,000 tons/year, NPK from 800,000 to 1,100,000 tons/year and other fertilizers from 1,000,000 to 1,200,000 tons/year.

**Ca Mau Fertilizer Plant is located in Mekong Delta.** This is the largest market in the country with potential agricultural and aquatic development, in which rice and fruit growth and export are the regional strength. Annual rice cultivation area is stable at 1.6 million hectares with 2 main crops of Winter-Spring and Summer-Autumn, excluding the third crop with an area of 650,000-750,000 hectares operating under export orientation (rice export of Mekong Delta account for 80% of total annual rice export, from 6 - 7 million tons, valued at more than USD 3 billion/year). It can be seen that with the Urea market share of 60% - 65% at Mekong Delta, this is an advantage that many other enterprises in the same industry are difficult to have.

**For fruit tree market,** area of land for growing fruit trees in the Mekong Delta accounts for more than 60% of the total fruit tree area in the country of more than one million hectares, in which many products are provided to the processing companies in the region for domestic consumption and export. In the coming years, this will be a major market share for new products and NPK products of PVCFC.

According to economic experts and scientific research teams, if invested appropriately, the economic efficiency from the fruit tree market will be higher than that of rice growth. Therefore, the potential development of fruit trees in the Mekong Delta is expected to bring more opportunities and to improve in the future.

This will help PVCFC develop and new products and NPK products as well as give nutrient solutions serving the regional development in the future.

**For vegetable market,** with a large cultivation area, distributed in fertile lands stretching across low lying areas along the basins of Tien Giang and Hau Giang rivers with a short cultivation time has created favorable for PVCFC to expand new fertilizers and high value organic fertilizers, making a great contribution to supporting the supply chain of “green - clean - beautiful” vegetable

products that are suitable to consumer taste and gradually meet the demand of retail supermarkets of the large domestic and foreign corporations.

**With the largest number of Level 1 and Level 2 agents nationwide,** PVCFC has been maintaining and expanding its market share of strategic fertilizer products, making important contributions to the structure of product consumption. In addition, with an advantage of bordering Cambodia, provinces in the Mekong Delta Region have been actively expanding trade exchange activities with Cambodian partners in various fields; strengthening market connectivity between the Mekong Delta and Cambodia; creating sustainable advantages to maintain and promote trade exchange between Vietnam and Cambodia in general and traders in border provinces in particular.

## TAKING ADVANTAGES FROM INDUSTRIAL TREES IN SOUTHEAST AND CENTRAL HIGHLANDS

Southeast and Central Highlands are potential markets for fertilizers serving industry trees, in which the demand for Urea consumption is from 180,000 to 220,000 tons/year; NPK from 1,100,000 - 1,200,000 tons/year; Potassium from 130,000 - 160,000 tons/year; and DAP from 40,000 - 50,000 tons/year; and other

# SWOT ANALYSIS

fertilizers from 500,000 - 650,000 tons/year. According to statistics, most of coffee and rubber trees in Vietnam are concentrated in the Southeast and Central Highlands, of which coffee is allocated in 3 provinces i.e., Dak Lak, Gia Lai, and Lam Dong in Central Highlands, with an area of more than 600,000 hectares. An area of 930,000 hectares of rubber located in Southeastern provinces, other crops such as pepper, cashew, tea, cassava and other fruit trees with high economic value. In general, demand for NPK, SA, Potassium fertilizer consumption for industrial crops is huge in these two regions. There is a high and promising potential for agricultural development in the future.

PVCFC is focusing on developing its distribution channels, supplying other high-value products based on original products including Urea, NPK, microbial and organic fertilizers to adapt to crop-species diversity and soil characteristics, climate conditions. NPK fertilizer products have been receiving positive feedback from agents and consumers thanks to quality, design, price suitable for soil characteristics and crops in the Central Highlands. These are important factors for PVCFC to continue its efforts in upholding its available potential and advantages, creating long-term engagement with agents and farmers in Southeastern and Central Highlands regions in the coming time.

## EXPANDING AND DEVELOPING MARKET SHARE IN CAMBODIA, INTERNATIONAL MARKETS

Cambodia has been an important market of PVCFC in its development strategy based on continuously increasing demand with annual average Urea consumption need of 380,000 - 410,000 tons/year; 250,000 - 280,000 tons of DAP/year; 260,000-300,000 tons of NPK/year and other types of fertilizers. If making good use of this opportunity, it will help PVCFC successfully penetrate and expand its brand "Ca Mau Fertilizer" to Cambodian.

Ca Mau Urea accounts for approximately 35%-40% market share per year, PVCFC, in the coming time, will boost NPK fertilizer consumption to 15-20% of market share in Cambodia. This aims to make a breakthrough in business strategy in Cambodia in particular and in Southeast Asia in general in its international market development strategy.

PVCFC continues to expand its presence in other countries such as Southeast Asia, South Asia, Latin America including Thailand, Myanmar, the Philippines, Bangladesh, Nepal, Sri Lanka, India, Brazil. These are large-scale and stable consumers of fertilizers, PVCFC will uphold its advantages in terms of price, product quality in these markets because its products have been positively valued by customers who tend to use granular fertilizers. In the coming years, PVCFC continues to develop new markets in Europe, Oceania and North America. In the early months of 2024, PVCFC has signed some important supply contracts in some demanded markets such as Australia, New Zealand. It is expected to achieve more positive results in the coming time.

Market diversification helps PVCFC reduce business risks in the context of domestic market saturation, severe competition in Southeast Asia and Asia regions with many new fertilizer plants putting into operation. Additionally, it helps reduce dependency on seasonal cycles, especially at the low season of the domestic market. It also aims to maintain its competitive advantages in international markets; proactively and deeply participating in the global business network toward higher standards of fertilizer industry in the new situation.

## EXPORT PRICE OF AGRICULTURAL PRODUCTS IS FORECAST TO RISE IN 2024

With the recovery of agricultural market in the past years, Vietnam's agricultural export is expected to continuously improve

in 2024, giving farmers peace of mind with stable psychological well being; building trust with farmers and businesses; supporting localities, businesses and farmers to strengthen scientific and technological innovation and investment in agricultural production development, making use of advantages of international market conditions to boost export of agricultural products to international markets in the context of high demand of these products.

Prices of key agricultural products such as rice, coffee, durian, pepper, and other fruit trees surged after Tet holidays due to the recovery of the Chinese market with high demand for importing agricultural products abroad. Rice price tends to rise because India continues imposing rice export quotas while global rice supply shows no sign of improvement. Russia-Ukraine war continues and shows no signs of easing which poses a risk of disruption in global agricultural product supply. Despite inflation, agricultural products seem to be priority items in many countries, so demand for these products still remains stable.



## INPUT MATERIAL EXPENSE

In general, forecasts said that input materials of urea production still face multiple difficulties due to high oil prices at 75-80 USD/barrel. This will have impacts on product cost and competitiveness of PVCFC, making it less competitive compared to other fertilizer plants in Middle East, Baltic and Southeast Asia. Especially with low costs, Russia and Iran are now ready to reduce product prices to win attractive deals while earning reasonable profit margins.

## COMPETITION PRESSURE FROM ASIA

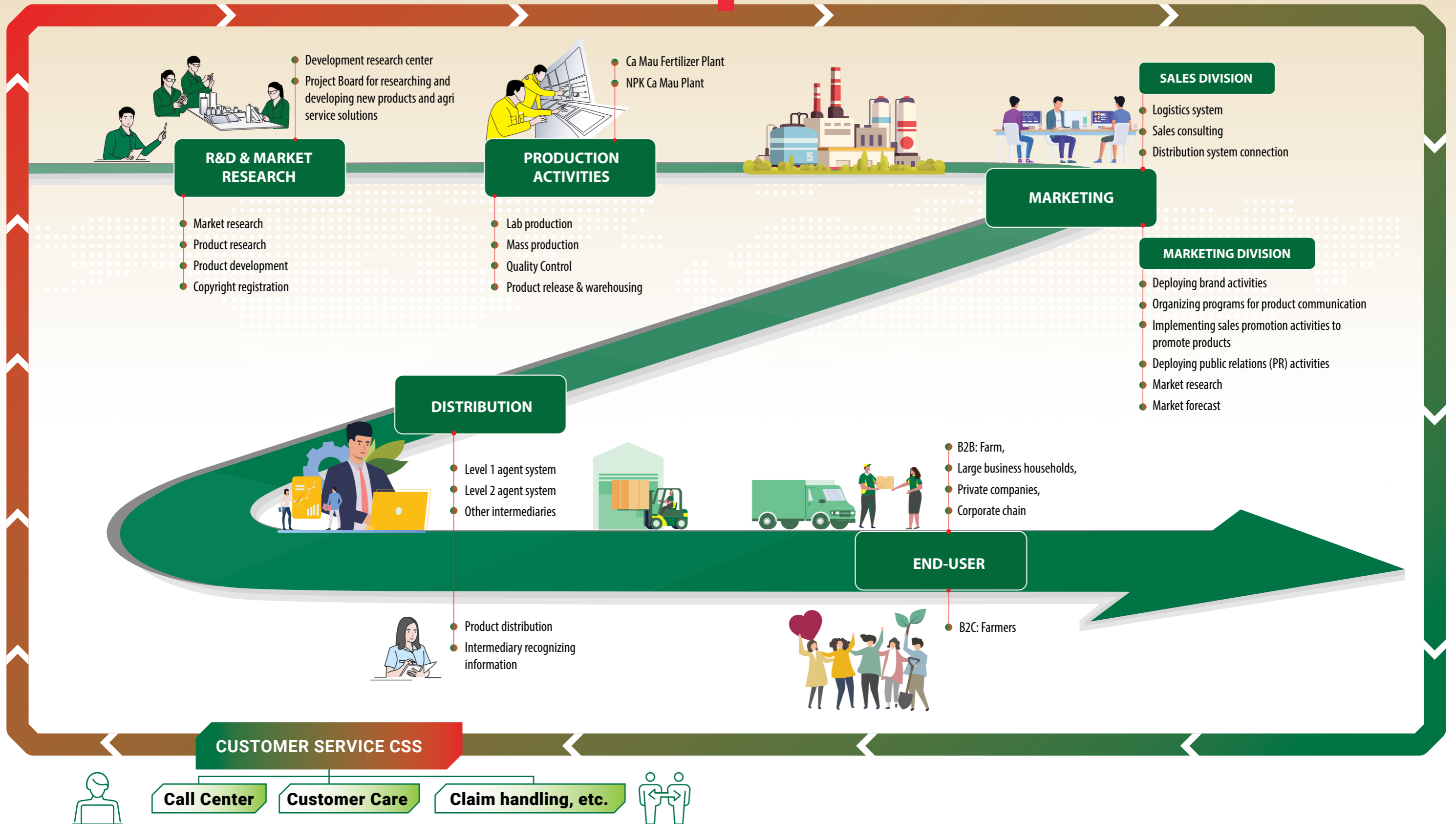
BFI Plant, Brunei, with a capacity of 1.27 million tons/year - one of the latest plants operating in recent time - has caused big pressures for the Southeast Asia region due to its low-cost advantage plus positive support of The Government of Brunei. BFI has penetrated into the Vietnamese market through small and medium-size shipments mainly serving needs of materials for NPK fertilizer plants in Southern Vietnam.

China continues innovating its domestic fertilizer business and production industry, promoting investment in gas powered environmentally friendly machinery. Scale is now China's biggest advantage. China still imposes export quotas on fertilizer, but this policy can change from the beginning of Quarter 2 2024, this can be able to create enormous pressures on other regions around the world.

# PVCFC SUSTAINABLE VALUE CHAIN

## ASSISTING DIVISION

- Direct** Big Data, Finance & Accounting Div., Technique Safety and IT Div., Supervisory Board
- Indirect** Human Capital Div., Planning & Investment Div., Commercial Div.



# DEVELOPMENT ORIENTATION



## DIGITAL TRANSFORMATION

PVCFC has been making certain investments in digital transformation by implementing and applying big projects: ERP system, Big Data, DMS, etc. at different levels to effectively exploit market information and data, distributors, farmers and gaining initial successes.

In 2024 and coming years, PVCFC commits getting involved deeply into Vietnam agriculture sector by collecting, exploiting data on climate, environment, crops, soil in some key regions by using tools, software, sensors, camera, automatic control devices, coordinating with related departments and agencies, enterprises, customers to effectively promote digital transformation for businesses and customers.

Continuing to invest and upgrade the “digital human” project and other new projects to further improve its communications and feedback channels with farmers and distributors based on online platforms for user feedback, enabling users to ask questions, addressing users’ inquiries. Farmers will receive information about products, quality, price and instructions of fertilizer usage on different crops in a quick and timely manner. Then, it also helps improve farming efficiency, reduce risks for farmers in the process of cultivation and production.



## INVESTMENT

Completing procedures for receiving, transferring M&A projects implemented by PVCFC in 2023 to quickly stabilize business and production activities, making use of available advantages, minimize and cut down unnecessary costs toward optimal efficiency of the whole system.

Conducting research, seeking new investment projects closely associated with the value chain, especially projects of warehouse, transport, production, domestic distribution system to serve missions and goals of scale and presence expansion in the domestic market and meet diverse needs of customers.

In order to ensure proactive and flexible supply of input materials for production in the coming time, PVCFC is seeking opportunities from potential projects abroad; evaluating feasibility and efficiency of these projects to consider purchasing projects with high potentiality to create long-term competitive advantages over competitors.



## GREEN PRODUCTION AND APPLICATION OF CIRCULAR ECONOMY MODEL

One of the solutions to reduce carbon emissions is to deploy energy saving measures in production activities. Being aware of this, PVCFC, for many years, has invested in initiatives, technical solutions for all production phases of Ca Mau Fertilizer Plant, including many practical and highly effective solutions, cost and energy saving; improving output efficiency for production processes and Ca Mau fertilizer products.

Making use of emissions released by the plant as fuel for fertilizer production helps save significant costs for PVCFC, ensuring environmental protection. PVCFC’s engineers have strengthened research and application of recovery and purification technology of CO<sub>2</sub> rich gas sources. The initial success has not only helped save fuel costs and earn dozens of billion VND per year but also minimize the amount of CO<sub>2</sub> emitted to the environment. In addition, PVCFC is in the process of doing pre-feasibility research of industrial gas production projects (Nitrogen, Argon, Green Hydrogen), CO<sub>2</sub> in food to further apply R&D solutions to improve green, sustainable production efficiency.

## DEVELOPMENT ORIENTATIONS IN 2024

In 2024, PVCFC will focus on 3 key pillars including: promoting investment; strengthening comprehensively digital transformation in main activities such as production, business, governance, logistics; building sustainable development strategy toward green, clean development and reducing greenhouse gas emissions.

### Developing environmentally friendly products

PVCFC has completed a comprehensive set of nutritional solutions by Bio-Coating technology, Complex Humate, bio-technology, slow-release fertilizer (SRF), Controlled Release Fertilizers (CRF) and BioMix, etc. to produce high quality fertilizer products and to bring high economic efficiency to farmers, improving crop yield and pest resistance, making positive and effective contributions to greenhouse gas emissions.

Especially, by applying Bio-Coating Technology helps PVCFC create new products that save fertilizer (N.46 Plus), fertilizers improving antibiotic resistance (N46.True), bio-fertilizer (N46.Rich), bio-Urea. These products help save 15-20% of fertilizer which is appropriate with greenhouse gas emissions programs and enhance economic efficiency for farmers.

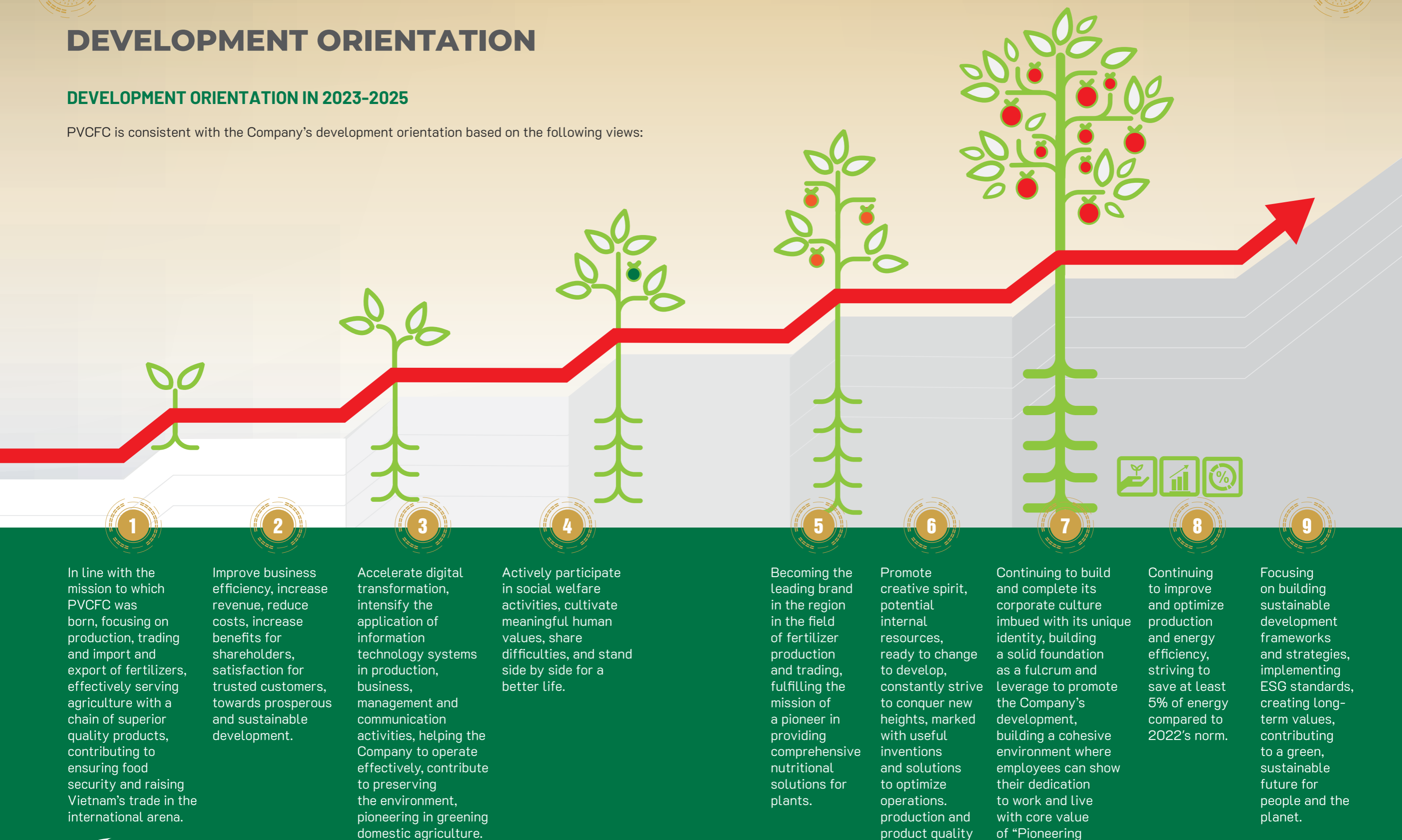
PVCFC also revises soil nutrient maps for each ecological region integrated with the database, promoting database digitalization and nutritional needs of crops to improve fertilizer use efficiency and reduce greenhouse gas emissions.



# DEVELOPMENT ORIENTATION

## DEVELOPMENT ORIENTATION IN 2023-2025

PVCFC is consistent with the Company's development orientation based on the following views:



1

In line with the mission to which PVCFC was born, focusing on production, trading and import and export of fertilizers, effectively serving agriculture with a chain of superior quality products, contributing to ensuring food security and raising Vietnam's trade in the international arena.

2

Improve business efficiency, increase revenue, reduce costs, increase benefits for shareholders, satisfaction for trusted customers, towards prosperous and sustainable development.

3

Accelerate digital transformation, intensify the application of information technology systems in production, business, management and communication activities, helping the Company to operate effectively, contribute to preserving the environment, pioneering in greening domestic agriculture.

4

Actively participate in social welfare activities, cultivate meaningful human values, share difficulties, and stand side by side for a better life.

5

Becoming the leading brand in the region in the field of fertilizer production and trading, fulfilling the mission of a pioneer in providing comprehensive nutritional solutions for plants.

6

Promote creative spirit, potential internal resources, ready to change to develop, constantly strive to conquer new heights, marked with useful inventions and solutions to optimize production and product quality of PVCFC.

7

Continuing to build and complete its corporate culture imbued with its unique identity, building a solid foundation as a fulcrum and leverage to promote the Company's development, building a cohesive environment where employees can show their dedication to work and live with core value of "Pioneering - Accountable - Considerate - Harmonious".

8

Continuing to improve and optimize production and energy efficiency, striving to save at least 5% of energy compared to 2022's norm.

9

Focusing on building sustainable development frameworks and strategies, implementing ESG standards, creating long-term values, contributing to a green, sustainable future for people and the planet.



# DEVELOPMENT ORIENTATION

## REGARDING THE TARGET MARKET



PVCFC's strategic target markets in the coming time focus on the Mekong Delta, Southeast and Central Highlands, Cambodia. In addition to these markets, the Company actively expands, explores, and penetrates potential international markets in South Asia, Latin America, Oceania, and Europe.

## REGARDING THE GROWTH TARGET



PVCFC strives to increase sales of fertilizer product lines from 6 - 10% per year, depending on the specific product structure and proportion of each product to ensure the completion of revenue and profit targets.

In terms of revenue, improving the growth rate from 5 - 10%/year and striving by 2025, PVCFC is one of the five leading businesses in Vietnam in terms of revenue.

## REGARDING THE TARGET MARKET SHARE



PVCFC aims to maintain a domestic fertilizer market share of at least 10%/year on a national scale.

Regarding Urea, maintain the domestic market share from 30 - 35%/year

Regarding NPK, strive to meet 10 - 20% of domestic market share and focus on dominating the domestic target at least 30%/market.

Regarding other fertilizer product lines, strive to meet 15 - 20% depending on specific product segments.

## REGARDING PRODUCT STRUCTURE



PVCFC continues to focus on manufacturing, trading and distributing Urea core products in the domestic market. Depending on the period, PVCFC proactively exploits export channels in a reasonable manner, ensuring domestic supply and demand balance to reduce risks of Urea supply surplus.

Regarding NPK, PVCFC strives to increase consumption in the domestic market, especially the target markets of the Mekong Delta, the Southeast and the Central Highlands, and the strategic market in Cambodia.

Besides the inorganic product line, PVCFC gradually expanded its portfolio and exploited the organic fertilizer segment with the product OM CAMAU to adapt to the changing business environment in the new situation.

In addition, in order to be proactive in trading other fertilizer products, PVCFC researched and exploited more import and export segments to organize the import of DAP, Potassium, NPK, SA fertilizer sources to serve the demand for raw materials of NPK Plant and other domestic distributors.

In an upcoming middle and long-term period, especially in 2023-2025 period, PVCFC aims to achieve bigger strategic goals, working out overall orientations in the new period.

## REGARDING DISTRIBUTION CHANNEL DEVELOPMENT



The Company continues to consolidate, develop and expand the distribution system at all levels, with orientation in the period of 2021 - 2025, the growth of the first-level distribution system is 2 times higher than the current one; the growth of the second-tier distribution system at 6-10%/year and the goal of at least 15,000 tier-2 agents.

The development of the distribution system is absolutely necessary to promote the consumption of NPK and other products as PVCFC enters a new stage of development with many new challenging goals.

Regarding the target market, PVCFC's focus is still on developing and consolidating the distribution system at all levels in the Mekong Delta, Southeast and Central Highlands, Cambodia, in parallel with developing a distribution model on the basis of effective application of IT in sales and distribution system management in order to rise to master the market and compete successfully against domestic and foreign competitors.

## REGARDING RESEARCH AND DEVELOPMENT (R&D)



PVCFC promotes research and development on the basis of devoting more resources from material resources, developing personnel, supplementing equipment, and modern and advanced laboratories to maximize R&D.

The priority goal of R&D is to introduce new fertilizer product lines with higher value than current products, competitive prices, and meet the needs of farmers and distribution systems, ensuring economic efficiency and business scale in each market.

In term of solutions, apart from internal resources, PVCFC also coordinates with international and domestic Institutes, Organizations, Schools through prestigious experts, scientists to create high quality products/nutrient solutions, meeting stringent requirements of the market and customers in the future.

## REGARDING MERGERS AND ACQUISITIONS (M&A)



With financial strength, PVCFC continues to conduct research and implement M&A projects with high feasibility to diversify its supply chain, prioritize exploiting the domestic market. The goals of M & A approach are not only to meet financial and business targets, but also ensure long-term competitiveness, brand development, closely control of the distribution system and maintain long-term competitiveness of PVCFC in the market.