

# AGRICULTURE





## SABIC SOLUTIONS FOR AGRICULTURE

SABIC is a significant player in the fertilizers industry. It supplies customers throughout the Middle East, Far East, Africa, and the US with a wide variety of agri-nutrient products, from general to highly specific, helping address the world's ever growing demand for food. The product range includes urea, ammonia, and a comprehensive portfolio of nitrogen-based inorganic products

The establishment of the Saudi Arabian Fertilizer Company (SAFCO) in 1965, through a joint venture between the Kingdom of Saudi Arabia and its citizens, marked a significant milestone for Kingdom's agri-nutrient sector. Evolving from these beginnings, the Company has expanded with the commissioning of new plants and unification of strategies to present a stronger front for operations. Having established a global presence, SAFCO underwent a rebranding in 2020, adopting the name SABIC Agri-Nutrients Company (SABIC AN).

SABIC AN is a world-class producer and marketer of agri-nutrients. As a front-runner in the sector, we take a strategic and long-term approach to ensuring sustainability of our products, services, business model, and wider impact on the Kingdom and planet. We have leveraged SABIC AN's robust technology and innovation pipeline and industry-leading collaborations to explore opportunities beyond conventional fertilizers; extending our reach to the entire value chain, seeking to meet the evolving needs of growers around the globe, and responding to the scale and pace of developments that affect our planet.



### SABIC AN VISION

- To become the preferred global leader in agri-nutrients by 2025.



### SABIC AN MISSION

- Contribute to global food security by providing sustainable agri-nutrient solutions to our customers and communities.
- Engage innovative minds to develop a unique and integrated range of sustainable agri-nutrient solutions using advanced and developed technologies to deliver leading-edge nutrients, towards higher yields of high-quality crops to feed an ever-growing global population.
- Encouraging and enhancing value for shareholders, customers and employees
- Attracting, developing and maintaining our greatest assets (our employees).

## OUR PRODUCTS

The company's product portfolio extends from general to highly specific, and caters to the world's ever-increasing demand for food, and its many supply challenges.



### NITROGENOUS FERTILIZERS AND PHOSPHATES



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SABIC AN has earned its place as a world-class producer and marketer of nitrogen-based inorganic products and phosphates, and these continue to form a key pillar of strategic future growth.

### DIFFERENTIATED PRODUCTS



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The Company leverages its strong research and development competencies to develop and introduce value-added and specialty products to the global market. They include products such as Zinc Coated Urea, Stabilized Urea, and Bio-Enhanced Urea.

The focus is on enhancing existing formulations and innovating new ones, not only to boost crop yields and quality but also to tackle various related challenges.

In addition to agri-nutrients fertilizers and chemical intermediaries, ammonia is finding new and promising applications in power generation, shipping fuel, and serving as carriers for hydrogen.

These emerging opportunities position the Company to play a pivotal role in influencing and driving market growth.

### TECHNICAL GRADE UREA (TGU)



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SABIC AN continues to supply manufacturers around the world with Technical Grade Urea (TGU). The superior quality and high purity of TGU meets global benchmarks and also helps marketing and distributing companies deliver premium solutions to their customers without compromising on quality.

### LOW-CARBON PRODUCTS



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In 2022, SABIC AN and Saudi Aramco obtained the world's first independent certification of low-carbon ammonia. Since then, the Company has continued to lead the field in developing products for the low-carbon agri-nutrients fertilizer market.

2023 marked another landmark achievement as SABIC AN delivered the world's first global shipment of low-carbon urea.

The Company aims to continue expanding its presence in the area of low-carbon Agri-nutrients - developing products that are in compliance with local regulations and global benchmarks.

## NPK grade for date palm

Granular NPK (NPK 16-8-16+15S)



### SOLUTION SUMMARY

- Developed specifically for date palm trees
- Provides balanced levels of primary and secondary nutrients during the whole year, helping healthy growth and good harvest

### VALUE PROPOSITION



- Single product for palm trees nutrients
- Contains primary and secondary nutrients
- Applicable for the whole year/season



## NPK grade for vegetables and green landscapes

Granular NPK (NPK 18-18-5+9S)



### SOLUTION SUMMARY

- Used in a wide range of vegetables and green landscapes
- Provides balanced levels of primary and secondary nutrients with its need during the whole year

### VALUE PROPOSITION



- Single product for a range of vegetables and green landscapes
- Contains primary and secondary nutrients
- Applied for the whole year/season
- Promoting homogeneity of primary and secondary nutrients





## NPK grade for tuber crops

### Granular NPK (NPK 11-29-19+6S)



#### SOLUTION SUMMARY

- Developed specifically for tuber crops and fruits which include potatoes, onions and watermelons
- Provides balanced levels of primary and secondary nutrients during the whole year

#### VALUE PROPOSITION



- Single product for palm trees nutrients
- Contains primary and secondary nutrients
- Applicable for the whole year/season
- Promotes healthy growth, provides good yield and produces excellent results



## Ammonia for agricultural/industrial applications

### ANHYDROUS AMMONIA



#### SOLUTION SUMMARY

- Main raw material for the production of urea
- Used as one of the raw materials for the manufacturing of several other fertilizer products including DAP, NP/ NPK, ammonium nitrate, calcium ammonium nitrate, ammonium sulphate and nitrogen solutions
- Ammonia can be applied directly to the soil, thus providing high nitrogen content
- Used for a number of industrial applications, such as caprolactum, acrylonitrile, nitric acid, melamine, explosives and glue

#### VALUE PROPOSITION



- Used in grains; injection to moist soils; dissolved in water and applied.
- High nitrogen content.



## Stabilized urea as Nitrogen use efficiency (NUE) grade

### ENRICHED UREA (SABIC STABILIZED UREA)



#### SOLUTION SUMMARY

- Stabilized Urea is Urea with inhibitor incorporated for stabilization
- Suitable for all types of applications and conditions

#### VALUE PROPOSITION



- Protects farmer's nitrogen investment by improving Urea efficiency
- Reduces nitrogen volatilization losses by up to 60-70%
- Improves nitrogen availability during critical crop-growth stages for more consistent yields



## UREA CALCIUM SULFATE FERTILIZER

### ENRICHED UREA (SABIC UCS 27)



#### SOLUTION SUMMARY

- Advised to be used in open fields for basal and/or top dressing
- UCS is an excellent Nitrogen source for cereals, fruits and vegetables and specifically for crops that require additional amounts of Sulphur and Calcium, such as Potato, Onion, Sunflower, Mustard, Sugarcane

#### VALUE PROPOSITION



- Nitrogen fertilizers fully granular product with three essential elements (Nitrogen, Sulfur and Calcium)
- Important contributor to efficient nutrient distribution
- Improves the nutrient uptake efficiency. (27 N + 7 S + 9 Ca)



## Urea enriched with zinc to solve zinc deficiency in the soil

### ENRICHED UREA (SABIC ZINC COATED UREA)



#### SOLUTION SUMMARY

- Urea enriched with Zn is an efficient way to solve Zn deficiency in the soil.
- It is suitable for all kinds of soils and different application methods (broadcasting or in fertigation)
- Suitable for a wide variety of crops across a wide range of environmental conditions

#### VALUE PROPOSITION



- Nitrogen fertilizers fully granular product enriched with Zn
- Incorporating Zn in urea fertilizers has a positive effect on plant growth and nutrient uptake



## Urea enriched with humic acid as biostimulant

### ENRICHED UREA (UREA PLUS HUMIC ACID)



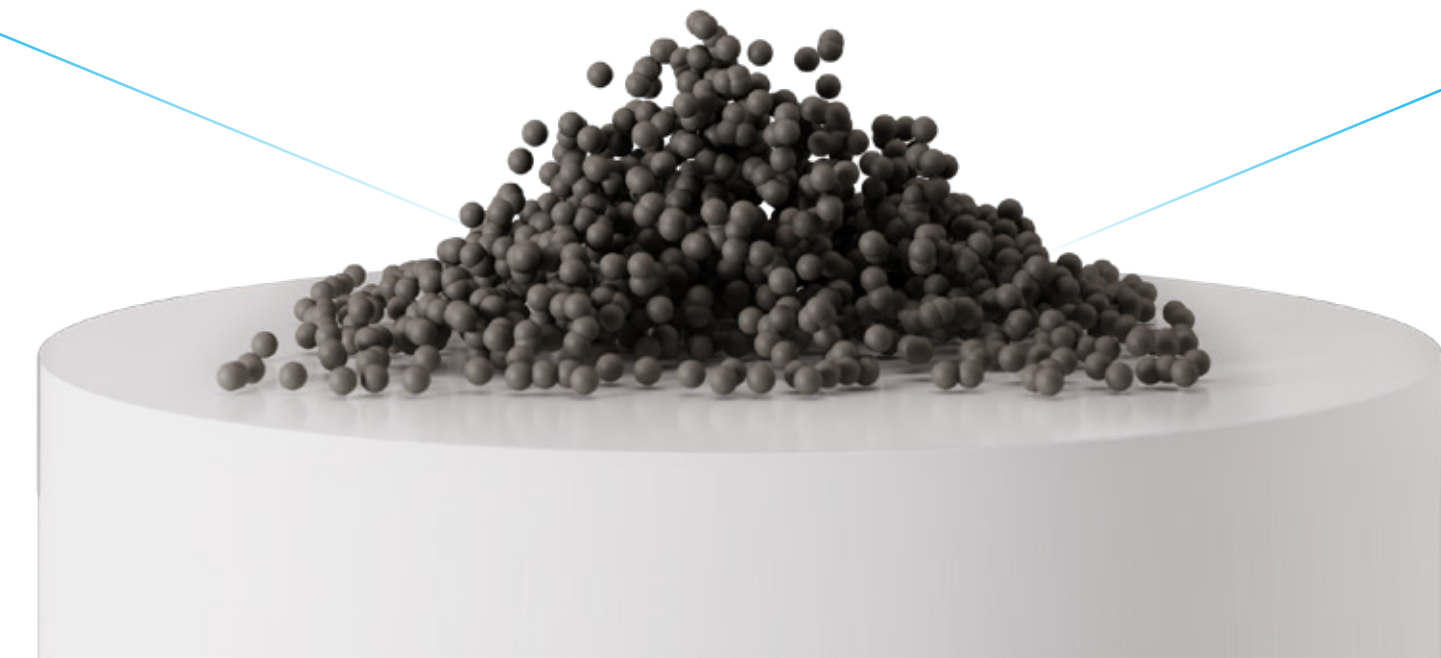
#### SOLUTION SUMMARY

- SABIC Urea Plus Humic Acid is an ideal Nitrogen fertilizer enriched with high performance humic acid
- It can be used in the planting fertilizer blends or used in top dressing
- It can be used in a wide range of crops like Cereals, Forage crops, Turf & landscapes, Vegetables crop, Sugarcane, Potato

#### VALUE PROPOSITION



- Nitrogen fertilizers fully granular product coated with humic acid
- Improves nitrogen use efficiency
- SABIC Urea Plus Humic Acid is 100% soluble and can be used for soil application or by fertigation





## GRANULAR UREA rich in nitrogen

### GRANULAR UREA



#### SOLUTION SUMMARY

- Suitable for a wide variety of crops across a wide range of environmental conditions.

#### VALUE PROPOSITION



- Nitrogen fertilizers fully granular product
- The highest nitrogen concentration in the available solid conditions



## PRILLED UREA rich in nitrogen

### PRILLED UREA



#### SOLUTION SUMMARY

- Suitable for a wide variety of crops across a wide range of environmental conditions.

#### VALUE PROPOSITION



- Prilled Urea is white, solid, odorless or slightly ammoniacal, water soluble, produced in both granular, prills, and pastilles with nitrogen content of 46%.
- The highest nitrogen concentration in the available solid conditions





# TECHNICAL GRADE UREA

## TECHNICAL GRADE UREA



### SOLUTION SUMMARY

- Environmental control applications, such as Selective Catalytically Reduction, SCR
- Used in Resins and Adhesives industries.
- Animal feed.
- Cloud seeding agent

### VALUE PROPOSITION



- TGU is a high purity source of nitrogen and is commonly used in the industrial sector

TECHNICAL  
GRADE UREA  
(TGU)



# MAP

## MONOAMMONIUM PHOSPHATE (MAP)



### SOLUTION SUMMARY

- MAP is often used to add the required proportion of phosphate and nitrogen needed for farming clover, wheat and barley, especially in sandy soil
- MAP is a high analysis source of phosphorus and low level of nitrogen, which makes it useful as a 'starter' fertilizer. It is recommended for most of crops and vegetables.

### VALUE PROPOSITION



- Agri-nutrients products that include P2O5 (52%) and ammoniacal nitrogen (11%)
- It supplies nitrogen and phosphorus to plants



## Lower carbon footprint based ammonia grade

### LOW CARBON AMMONIA



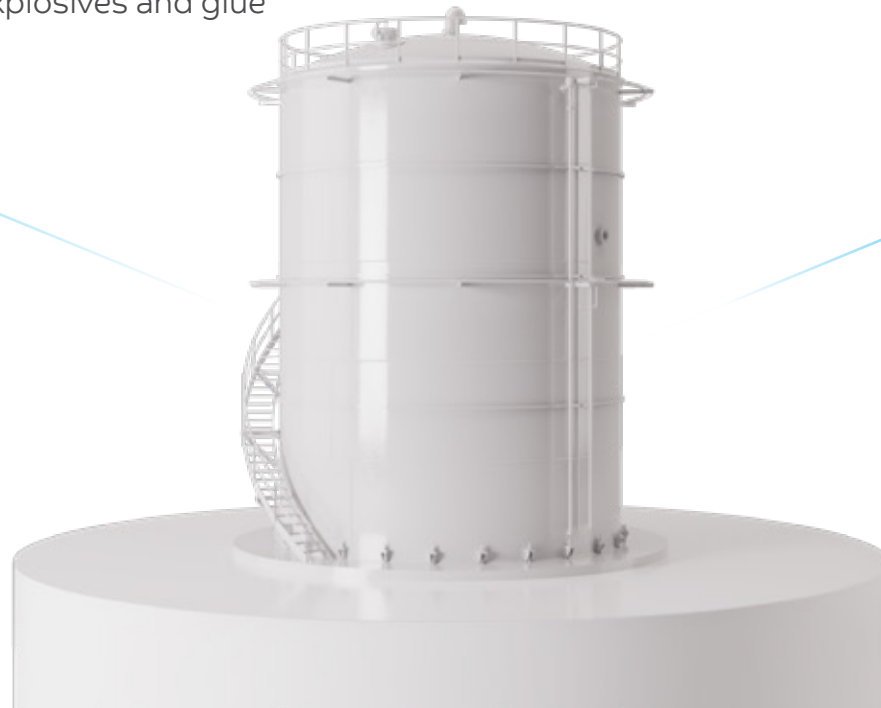
#### SOLUTION SUMMARY

- Low carbon ammonia certified by third party on the basis of reduced carbon footprint enabled by carbon capture and utilization (CCU) in downstream applications or underground sequestration
- Can be used as raw material for the production of low carbon urea
- One of the raw materials for the manufacturing of several other low carbon fertilizer products including DAP, NP/NPK, ammonium nitrate, calcium ammonium nitrate, ammonium sulphate and nitrogen solutions
- Can be applied directly to the soil, thus providing high nitrogen content with lower carbon content
- Used for a number of industrial applications, such as caprolactam, acrylonitrile, Nitric Acid, melamine, explosives and glue

#### VALUE PROPOSITION



- Lower carbon footprint than grey ammonia
- High nitrogen content with lower carbon footprint



## Lower carbon footprint based urea grade for fertilizer applications

### LOW CARBON UREA



#### SOLUTION SUMMARY

- Low carbon Urea is produced utilizing certified Blue Ammonia with zero Carbon Footprint on the basis of third party certification by TUV-R.
- It establishes the tonnage of NH<sub>3</sub> production at SABIC Agri-Nutrients that can be certified as blue/low on the merit of captured CO<sub>2</sub> from the process that is utilized in other SABIC processes.
- Helps in decarbonizing the value chain CO<sub>2</sub> emissions linked to production fertilizers
- It will be further utilized to produce multiple grades of Enhanced Efficiency Fertilizers (EEF) with the lowest overall GHG Direct and Indirect emissions from scope 1, 2 & 3.

#### VALUE PROPOSITION



- Lower carbon footprint than grey urea
- Highest nitrogen content (with lower carbon footprint) in the available solid conditions

