



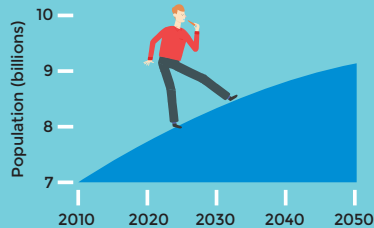
## Factsheet

# What about Fertilizers?

We all need food to grow and be healthy - plants need to eat so that we can eat.



The world's population will grow by 25% by 2050.



Fritz Haber and Carl Bosch discovered how to synthesize ammonia from air in 1908. They received the Nobel Prize in Chemistry.

## 4 BILLION PEOPLE

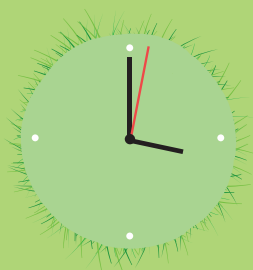
Fertilizers are responsible for keeping 4 billion people alive today.



Fertilizers feed plants for better, healthier, stronger yields that will feed the world for centuries to come.



The Haber-Bosch process had a significant role in the Green Revolution of the 1960s. Widespread adoption of agricultural technologies and fertilizer have lifted billions out of poverty and famine.



We lose 10 acres of farmland per minute - less and less farmland will need to feed more and more people.



Fertilizers account for 50% of global food production.



In 1960, one hectare of land fed two people.



In 2025, one hectare of land will need to feed five.

### The elements

Three elements - nitrogen, phosphorus and potash - are the building blocks of life. When applied the correct way, plants will absorb these nutrients from the soil and become stronger and healthier, with a better yield.



### Nitrogen

Without nitrogen, plants cannot grow their leaves.

Nearly 80% of our atmosphere is nitrogen but plants' leaves can't directly consume it. They need to consume the nitrogen from the soil.



### Phosphorus

Phosphorus is an extremely potent element for plants, which aids healthy growth.

It is not available in sufficient amounts in all soil, so it is mined from areas rich in phosphate rock.



### Potash

Potash can improve a plant's yield, nutrient value and disease resistance. It is very valuable for plant health and scarce in most soil.

Potash is mined from deep within the soil from evaporite deposits.

### Minerals

When plants absorb nutrients from the soil, those nutrients must be replaced in order to continue growing healthy crops from the same land. Fertilizers contain secondary minerals - zinc, magnesium, calcium, sulphur and iron - to act as a multivitamin for the soil, allowing crops to flourish.