

# FERTILIZER

**FERTILIZERS** are one of the greatest drivers of crop yield growth around the world. By adding essential nutrients to the soil, fertilizers can enhance the yield and quality of harvests.

## A LONG HISTORY

European farmers applied the first fertilizers, made from manure, **6000 years ago**, and have been using them to improve harvests ever since.

## ORGANIC & SYNTHETIC

Organic fertilizers are typically farm waste products like manure and peat, while synthetic fertilizers are developed by researchers to provide **precise nutrient levels**.

## HOW IT WORKS

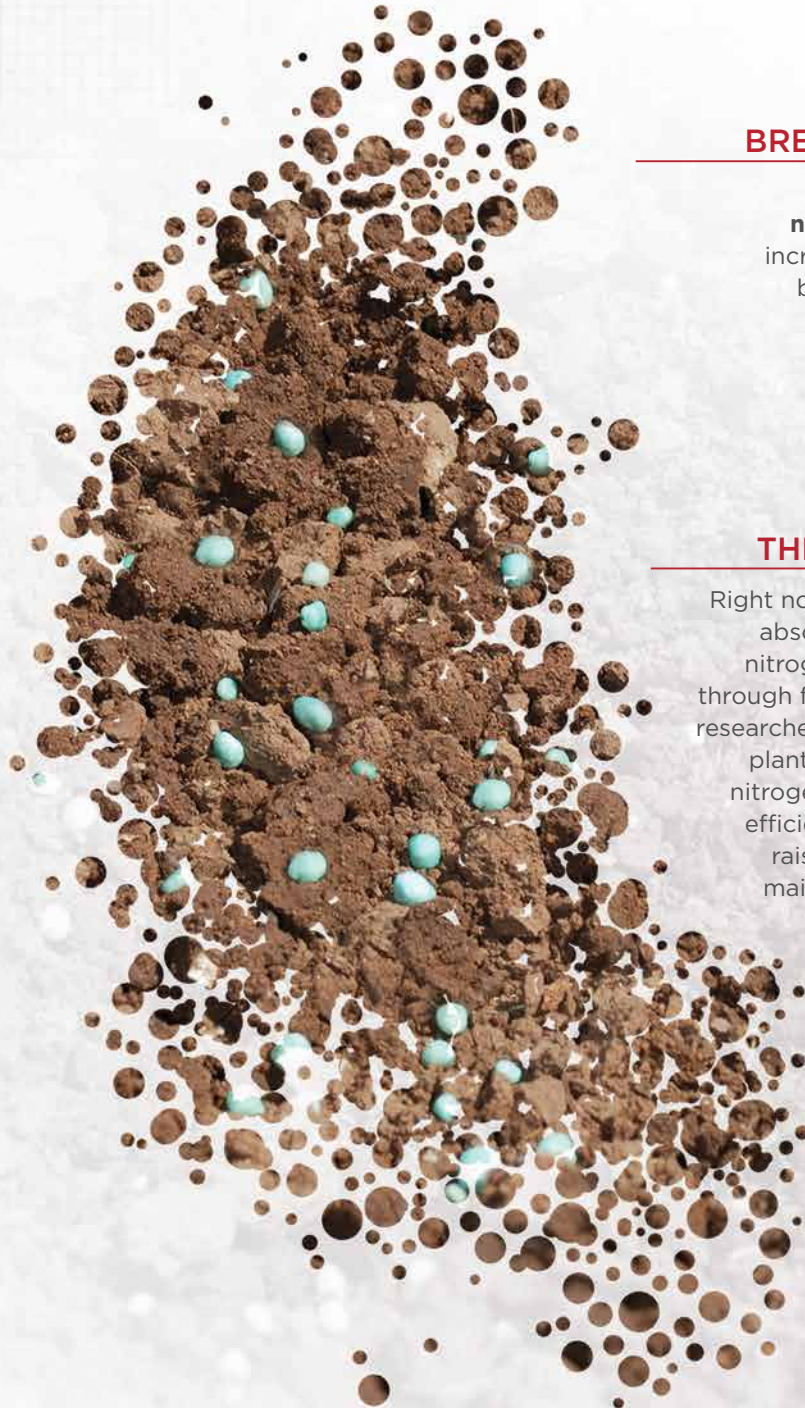
Think of fertilizers as **healthy plant food**. Just like vitamins for people, fertilizers provide extra levels of essential nutrients like nitrogen, phosphorous and potassium so plants can grow faster, heartier and healthier.

## CREATING BREADBASKETS

In the U.S. alone, **nitrogen fertilizers** increase maize yields by 69% and wheat by 19%.<sup>1</sup>

## THE NEXT STEP

Right now, crops can only absorb about half the nitrogen farmers apply through fertilizer. However, researchers are developing plants that can absorb nitrogen fertilizers more efficiently, which could raise global irrigated maize yields **as much as 52%** by 2050.<sup>2</sup>



INNOVATION DRIVES AGRICULTURE