

SOME THINGS ARE JUST BETTER TOGETHER.



ROCK + ROLL

JEANS + BOOTS

FERTILIZER + BIOPATH



BACON + EGGS

BURGERS + FRIES

BioPath[®]
BIOLOGICAL FERTILIZER COMPLEMENT

FROM



THE ADVANCED
CROP NUTRITION GUIDE

ADVANCED CROP NUTRITION

Crop nutrition needs are changing in corn. Higher-yielding hybrids, aggressive production goals and new and evolving plant stresses require an advanced approach to fertility. As your trusted crop nutrition partner, Mosaic invests in research and innovative products to unlock your farm's fullest potential. Our newest biological, BioPath®, enhances the relationship between soil and crop nutrients to boost crop revenue potential.

FERTILIZER'S PERFECT COMPLEMENT

BioPath® is a biological fertilizer complement formulated with proven strains of PGPR — Plant Growth Promoting Rhizobacteria — that increases nutrient availability, uptake and utilization and improves early-season plant growth and vigor, optimizing yield potential in corn.

On-Farm Value

BioPath is the perfect complement to your early-season fertility program and is an economical way to improve your return on fertilizer investment (ROFI).

Ease of Use.

BioPath is compatible with most liquid fertilizers and crop protectants, has no special storage conditions, and has a 24-month shelf-life. It also has a shelf-life of up to 18 months in fertilizer blends, ensuring it's ready to go when your customers are.

Consistent Performance.

The strains of *Bacillus* bacteria in BioPath, their modes of action and use rates are well-understood. BioPath has consistently performed in research trials, with over an 80% win rate.

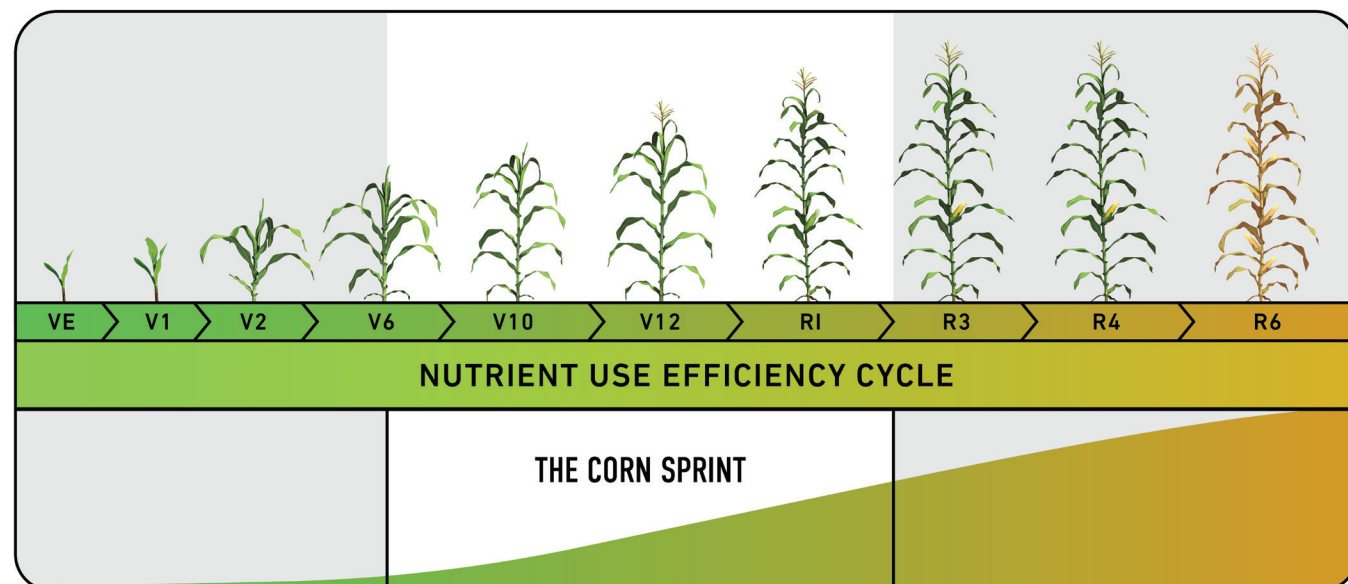
Economics.

BioPath's cost per acre is at or below the industry standard. Coupled with a yield advantage ROI of over 3 to 1 makes it an economical way to improve return on fertilizer investment.

PREPARING FOR THE CORN SPRINT

Matching nutrient supply with a corn crop's needs is critical for optimizing yield and grain quality potential, especially in high-productivity environments. A corn crop uses as much as 60 percent of available nutrients during the rapid growth window from V6 to R3. We call this critical developmental stage the "Corn Sprint," and it's when the crop's nutrient demand is highest as it prepares for pollination and grain fill.

Since there is a finite number of nutrients a plant can absorb in any one day, any limitations can result in a lost opportunity to maximize yield potential. BioPath enhances nutrient availability, uptake and utilization to support the rapid development during the Corn Sprint.



BioPath's Role During the Corn Sprint

BioPath is a biological fertilizer complement that can be included in your early-season fertilizer applications to improve nutrient use efficiency and set up your crop for success during the pivotal developmental period before pollination and grain fill. Here's how BioPath enhances your crop nutrition strategy:

Increases nutrient availability

The select strains of *Bacillus* in BioPath produce organic acids and enzymes that improve the solubilization of fertilizer into plant-available forms.

Facilitates efficient nutrient uptake and utilization

BioPath helps produce plant growth promoting compounds essential for root development and growth. A healthier, more robust root system enables more efficient nutrient absorption.

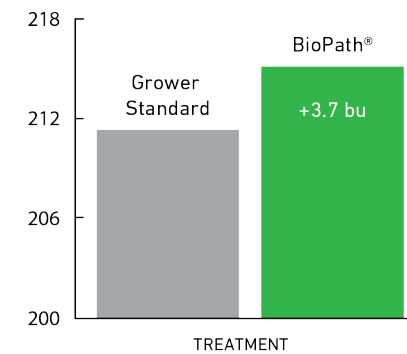
Improves plant health and yield potential

BioPath helps harness soil nutrients, so corn plants have the nutrition they need at peak uptake times throughout the season, particularly during the Corn Sprint. Better nutrient efficiency combined with more vigorous early-season plant growth can increase the return on fertilizer investments and optimize corn yield potential.

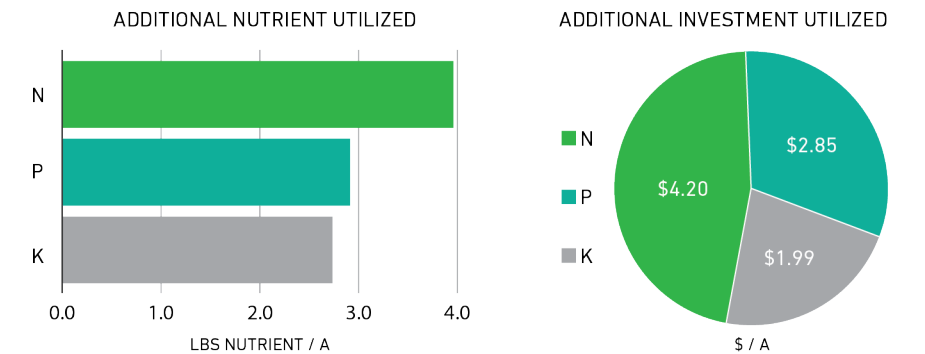
FIELD TESTED

BioPath has been rigorously tested in fields like yours, with consistent performance across environmental conditions.

BioPath Optimizes Yield Potential



Increase Return on Nutrient Investments with BioPath



FREQUENTLY ASKED QUESTIONS

How does BioPath work?

BioPath contains select, highly effective strains of spore-forming *Bacillus* bacteria (PGPR) that colonize in and around developing corn roots and promote positive plant growth responses. The select strains of *Bacillus* in BioPath produce organic acids and enzymes that improve the solubilization of fertilizer into plant-available forms.

How is BioPath different from other biologicals on the market?

BioPath is formulated with well-researched and field-tested *Bacillus* strains that deliver proven plant health benefits. BioPath has consistently performed in research trials, with over an 80% win rate.

How does BioPath fit into my operation's fertility program?

BioPath is a convenient complement to liquid fertilizer programs and is compatible with most crop protectants and liquid fertilizers. It can be pre-blended at the retailer or simply toss it in the tank – there are no special handling or storage requirements.

What value does BioPath bring to the farm?

BioPath is an affordable way to increase your return on fertilizer investment (ROFI). Adding BioPath to your fertilizer program helps ensure that nutrients are accessible and plant-available ahead of critical plant uptake periods. With a yield advantage ROI of over 3 to 1, BioPath makes your soil and fertilizer work harder, allowing your crops to grow stronger and increasing your ROFI and overall profitability.

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Learn More at CropNutrition.com/BioPath

Additional nutrient utilized calculated using typical corn fertilizer rates in the USA (180 N, 90 P, 160 K), multiplied by the treatment effect increases in total nutrient uptake of 2.2% for N, 3.2% for P and 1.7% for K. Nitrogen \$ utilized calculated using UAN32 \$444/ton, Phosphorus \$ utilized calculated using MAP \$800/ton, Potassium \$ utilized calculated using Potash \$647/ton. <https://www.dtnpf.com/agriculture/web/ag/crops/article/2021/10/06/fertilizer-price-gains-losing-steam>.

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