



THE
BIOLOGICAL
CHOICE

Boost Nutrient Uptake & Maximize Returns

The Financial Benefits of BioPath®

Rising input costs and lower commodity prices are putting financial pressure on growers, making it crucial to maximize every dollar spent on crop production. With fertilizer contributing to as much as 60% of crop yield,* ensuring it delivers maximum value and performance is essential for profitability. BioPath®, a biological fertilizer complement from Mosaic Biosciences, offers a unique solution by enhancing nutrient uptake and improving the return on fertilizer investment (ROFI).

The importance of efficiency

When grain prices are low, cutting back on fertilizer may seem like an easy solution. However, Matt Sowder, Director of Field Solutions at Mosaic Biosciences, emphasizes that profitability isn't about reducing inputs, but about making them work harder. "Maximizing your return on fertilizer investment should always be considered an excellent investment because you're making more use of something you've already spent money on," says Sowder.

BioPath allows the nutrients already present in the soil—whether native or applied—to be taken up more efficiently by the plant. By enhancing nutrient uptake, BioPath ensures growers get

maximum value from their fertilizer investment, ensuring strong crop performance and returns even when prices are low. "You have to decide what you're going to invest in. The reality is that the technology we're providing through BioPath is enabling improved nutrient use efficiency", added Sowder.

“ It's about making the fertilizer you've already invested in work harder for you.

* <https://doi.org/10.2134/agronj2005.0001>

Maximizing ROI with BioPath

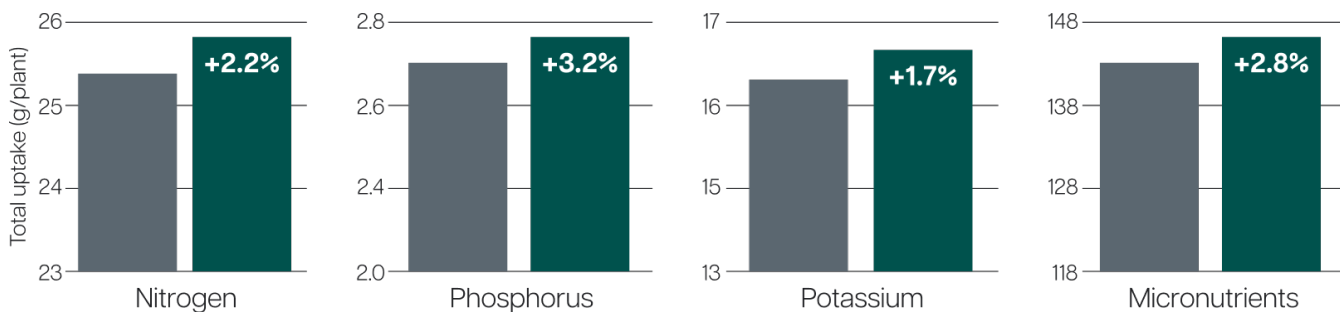
In field trials, BioPath demonstrated clear benefits, including yield improvements and increased nutrient efficiency. According to the TruResponse Biological Field Testing, BioPath increases the uptake of key macro and micronutrients by up to 2.2% for nitrogen, 1.7% for potassium, and 3.2% for phosphorus.†

This enhanced nutrient use efficiency leads directly to yield increases—an average of 3.8

bushels per acre in sidedress applications and 3.2 bushels per acre in in-furrow applications.

These increases translate into significant ROI gains, with farmers seeing returns as high as 3 to 1 for sidedress and 2.5 to 1 for in-furrow applications.† Even under less-than-ideal growing conditions, this improved efficiency supports crop health, helping plants better withstand adversity and finish their life cycle more robustly.

BIOPATH INCREASES TOTAL NUTRIENT UPTAKE



All treatments received grower standard production inputs to include side-dress nitrogen. Data reflects the average difference of 325 corn plants across 12 locations. Total nutrient uptake = biomass x nutrient concentration. Biomass and nutrient concentration at approximately V12 to VT.

“A more robust plant is more likely to have stronger stalks and stronger roots that are going to weather conditions better, and it’s going to finish its life cycle in a proper fashion. So your overall return on fertilizer investment also has an indirect effect on [your] crop,” Sowder said.

Additionally, by driving more nutrients into the plant, BioPath helps growers capture an additional \$5.81 per acre from their fertilizer investment, enhancing their bottom line even before harvest.†

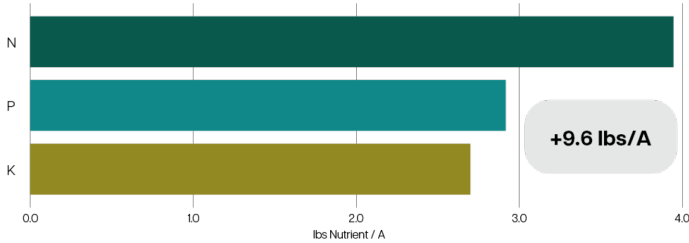
“ Your overall return on fertilizer investment also has an indirect effect on your crop.

\$5.81 more per acre with BioPath

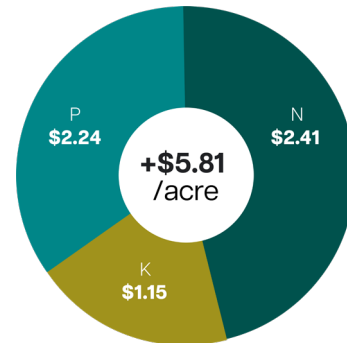
† Mosaic Biosciences data on file.

Return on fertilizer investment

ADDITIONAL NUTRIENT UTILIZED



ADDITIONAL INVESTMENT UTILIZED



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Affordable and versatile: A low-risk, high-reward solution

One of BioPath's major advantages is its affordability. "The cost of BioPath is relatively low—it's around the cost of a single bushel of corn per acre," Sowder noted. This affordability makes

“ It's around the cost of a single bushel of corn per acre.

it a low-risk, high-reward solution for growers looking to optimize their fertilizer investment. In addition to its cost-effectiveness, BioPath is highly versatile. It can be applied in-furrow, mixed with herbicides, or combined with liquid fertilizers—making it easy to integrate into existing field management practices without complicating operations. "It's a flexible solution that doesn't complicate the farmer's workflow," says Sowder.

The value of BioPath in tough times

When margins are tight, every input dollar must work harder to ensure profitability. BioPath® provides a proven, cost-effective solution for increasing fertilizer efficiency and improving ROFI. By enhancing nutrient uptake, BioPath ensures growers maximize the return on their fertilizer investments, allowing them to remain profitable even in a low-price crop market. As Matt Sowder concluded, "In tough economic conditions, maximizing fertilizer efficiency can mean the difference between just getting by and turning a profit."

“ Maximizing fertilizer efficiency can mean the difference between just getting by and turning a profit.

How BioPath works

BioPath is a biological fertilizer complement designed to improve nutrient availability, uptake, and utilization, driving stronger early-season plant growth and optimizing yield potential. Formulated with proven strains of Plant Growth Promoting Rhizobacteria (PGPR), BioPath works by flooding the rhizosphere—the critical area around plant roots—with beneficial microbes. These microbes enhance access to essential macronutrients like nitrogen, phosphorus, and potassium, ensuring plants can absorb and utilize them more effectively.

Increasing nutrient availability, uptake and utilization

The Bacillus strains in BioPath produce organic acids and enzymes that break down fertilizers

into plant-available forms. This process increases nutrient uptake, improves plant vigor, and drives healthier, more robust growth without the need for additional fertilizer. By maximizing the efficiency of the nutrients already in your soil and fertilizer, BioPath ensures crops get more out of every application, improving nutrient use efficiency and reducing waste.

Improving plant health and yield potential

With BioPath, you not only enhance plant health but also improve the return on fertilizer investment (ROFI). By optimizing nutrient utilization, BioPath helps you make the most of the resources you've already invested in, leading to healthier crops and stronger yields.

TruResponse™

A promise of proven performance

It's a fact: Biologicals work. But not all biologicals deliver equal results everywhere.

That's why we created the Mosaic Biosciences TruResponse platform—a first-of-its-kind website that gives you the area-specific trial data

grounded in science and proven by growers on a commercial scale.

This transparent sharing of results—both what's working and what isn't—helps growers improve the effectiveness of their existing crop nutrition program.



Discover new data throughout the season.
New trials are added regularly.