Microbial inoculant for optimizing fertilizer use and promoting root growth.

- Maximize return from fertilizer applications
- Improve harvest quality and yield
- Exceptional ROI
Grower Benefits

BioPath® is a mixture of highly effective proprietary bioactives of PGPR – Plant Growth Promoting Rhizobacteria that provide multiple modes of action for enhanced plant growth, yield potential, and harvest quality.

FERTILIZER EFFICIENCY
BioPath® improves the solubilization, cycling, and plant uptake of nutrients both from applied fertilizer and in the soil bank. Phosphorus uptake is enhanced by greater root volume and Phosphorus solubilizing enzymes. Iron uptake and metal acquisition is improved by the production of natural chelating agents (siderophores).

IMPROVED HARVEST QUALITY AND YIELD POTENTIAL
BioPath® also promotes root and shoot growth, which can lend to greater leaf area and increased chlorophyll content. This results in increased production of starches, sugars and bio solids each of which contribute to improved harvest quality and yield.

EASE OF APPLICATION
BioPath® is unique in the agriculture industry because of Pathway’s formulation technology and ability to deliver a truly effective rate of bacterial spores when blended or applied with fertilizer. This provides the grower with consistent product performance without incurring additional application cost.

EXCEPTIONAL ROI
By optimizing fertilizer utilization and enhancing plant growth an exceptional ROI is realized – not just from the product itself, but with crop production inputs as a whole. As a result, growers maximize yield potential and are positioned to be more profitable.
Nutrient Response

1. Fertilizer with BioPath® applied to crops at key growth stages.

2. BioPath® improves the solubilization of fertilizer into plant available forms, and release bound nutrients.

3. A more robust root system increases nutrient and water uptake.
Performance Results

**INCREASED YIELD ON POTATOES**

*Potato Trial Summary* – Results reflect average of 11 potato independent third party research trials/demos conducted in Maine, Wisconsin, Idaho and Colorado from 2015 to 2017. All treatments received grower standard production inputs.

![Graph showing increased yield on potatoes](image-url)

- **Grower Standard**: 468 cwt
- **Increase of 29 cwt/ac**: 497 cwt
IMPACT ON SQUASH PLANT GROWTH AND MARKETABLE YIELD

UC Davis Field Trial on Squash variety Noche – 2016
BioPath applied 1 pt/ac at plant, 21 and 45 DAP. Harvest Dates: 07/20, 07/26, 08/02 & 08/09.
*Data significantly different vs. untreated at P ≤ 0.05.

Root Growth 40 DAP
- Control: 11.5 g
- Control + BioPath: 16.8 g *
- 31% increase in root growth

Shoot Growth 40 DAP
- Control: 669 g
- Control + BioPath: 893 g
- 25% increase in shoot growth

First Harvest
- Control: 113.4 CWT/ac
- Control + BioPath: 216.2*
- Increase of 102.8 cwt/ac

Total – 4 Harvest
- Control: 366.7 CWT/ac
- Control + BioPath: 477.4
- 30% increase in total yield
INCREASED QUALITY AND YIELD ON TABLE GRAPES

Sawtooth Ag Research, CA Field Trial on Table Grape variety Vintage Red – 2017
BioPath applied 2 pts/ac pre-bloom thru drip, then 1 pt/ac foliarly x 5 monthly apps starting at petal fall. All treatments received grower standard fertilizer and production inputs. *Data significantly different vs. untreated at P ≤ .10.

- 18.2 #1’s Grower Std.
- 32.3 #1’s* BioPath
  - Increase of 14.1 #1 bunches/plot

- 739 bxs Grower Std.
- 886 bxs* BioPath
  - Increase of 147 bxs/ac

*Data significantly different vs. untreated at P ≤ .10.
### BioPath® Technical Profile

| **Mode of Action** | • Nutrient solubilization and cycling improving nutrient availability – macronutrients and micronutrients  
• Root growth promotion – improved production of root hairs and root tips for increased water and nutrient uptake |
| **Fertilizer Compatibility** | • Effective with a wide range of raw nutrients, blends and organic solutions. Contact a Pathway representative for a complete list of compatible fertilizers. |
| **Active Ingredients – Proprietary PGPR strains** | • Bacillus subtilis  
• Bacillus methylotrophicus  
• Bacillus licheniformis |
| **Formulation** | • Water based |
| **Shelf life** | • 24 months from date of manufacture |

### BioPath® Use Rates at a Glance*

<table>
<thead>
<tr>
<th>Application Rate</th>
<th>Starter</th>
<th>Sidedress or Drip</th>
<th>Broadcast and Manure</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 to 32 oz/acre</td>
<td>16 to 32 oz/acre</td>
<td>64 oz/acre</td>
<td></td>
</tr>
</tbody>
</table>

*Always consult label or contact a product representative for complete use directions.