



## **PGP4 and PGP2R**

### *Plant Growth Promotion*



As a driving force for finding effective solutions for important environmental issues, we have developed bacteria strains specifically geared to promoting healthier, stronger plants, with a faster growth cycle.

With a commitment to promoting soil health and overall long-term sustainability, we have developed two effective all-natural products that aim to replace problematic fertilization techniques, while still promoting increased germination and yield of plants.

***PGP is an agricultural biostimulant that harnesses the power of microbes.***

- Up to 30% increase in plant volume
- Up to 30% increase in yield
- Up to 20% decrease in fertilizer usage
- Increased resistance to bacterial fungal pathogens
- Enhanced soil ecosystem

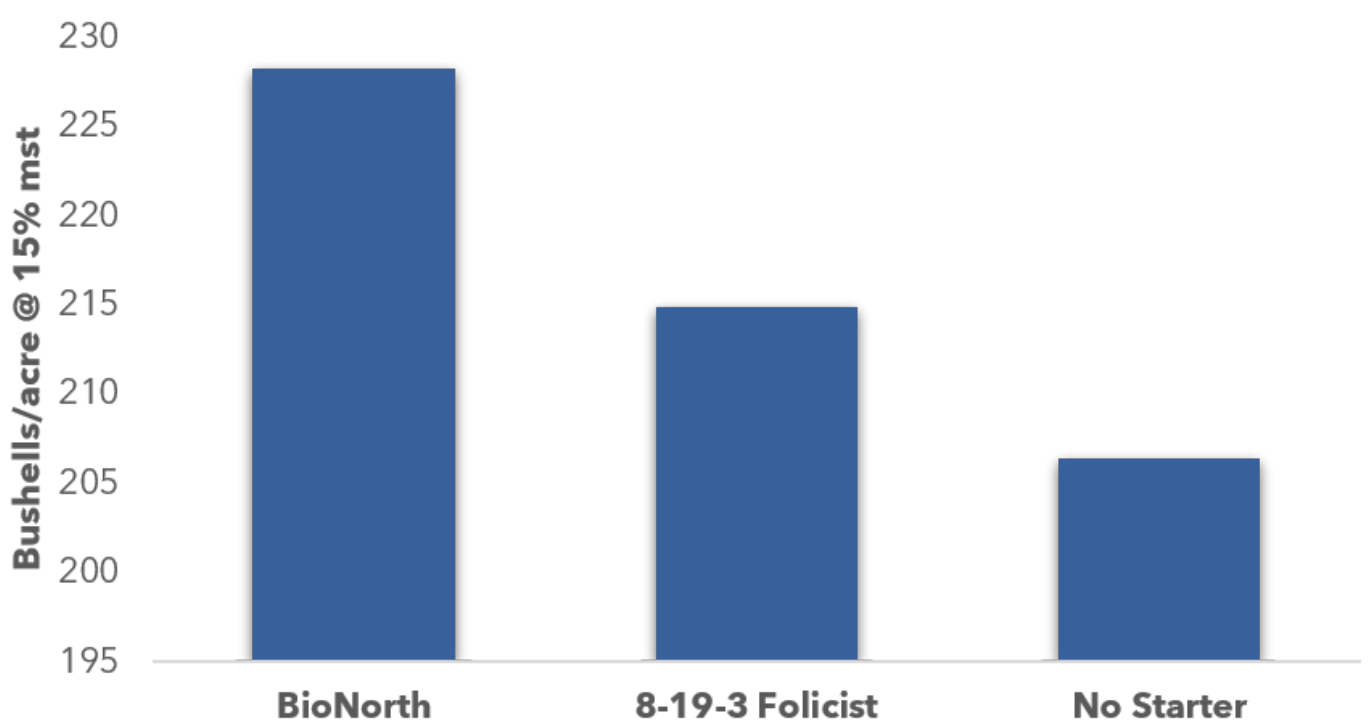
***Nutrient and water uptake in plants is enhanced.***



(Left) A green pepper grown with standard NPK fertilizer.  
(Right) A green pepper grown with PGP and reduced NPK fertilizer.



## *The soil microbiome is revitalized, supporting a healthy ecosystem.*



Corn growth with BioNorth's proprietary consortia showed early, even, emergence; strong growth; and less disease late in the season.

## *Fertilizer efficacy is augmented and, over time, the need for it is reduced.*



Half of a lawn, seeded and then treated with only fertilizer, 5 days after germination.



The other half of the lawn, seeded and then treated with fertilizer and PGP, 5 days after germination.

### ***PGP4 and PGP2R***

PGP4 includes 4 strains of bacteria geared to enhance plant growth by increasing the growth cycle, plant size, and flower or fruit bearing capacity.

PGP2R contains two strains of bacteria; one that promotes plant growth and one that improves plant growth as well as inhibits pathogens and disease.

**For more information on PGP, visit:**  
[bionorthsolutions.com/products/agricultural-inoculants/](http://bionorthsolutions.com/products/agricultural-inoculants/)

