



As the world's largest producer of plant-based humic/fulvic acid products, we believe in the principles of sustainability and stewardship. We are different in the fact that, unlike conventional humic/fulvic acid products isolated from leonardite, our products are extracted from harvested straws, making them organic-based, renewable, cost-effective and eco-friendly.





What Are Humic and Fulvic Acids?


Humic and **fulvic acids** are humus substances, which are clusters of small molecules chemically/biochemically/microbially transformed from plants or minerals, capable of sustaining plant growth and soil life, regulating soil carbon and microorganisms, and dealing with anthropogenic substances. Humic acid becomes less water soluble as pH level decreases, but fulvic acid remains water soluble at any pH level, thus a more effective form of humus substances. Vastly® fertilizer products are mostly fulvic acid-based.

Benefits of Vastly® Products


 **Better Nutrient Uptake for Higher Yield**
Vastly® improves nutrient uptake. Higher yield is achieved at normal fertilization or similar yield with reduced fertilization.

 **Multiple Methods of Application**
Vastly® may be used alone or in combination with other products (fertilizers, pesticides, fungicides), as a soil application or foliar application, to achieve the best result for different crops.

 **Less Need for Pest Control and Disease Control**
Vastly® improves crop health and resilience, and reduces need of pest control and disease control.

 **Better Soil and Water Conservation**
A major part of the soil's organic matter is comprised of humus substances. Use of Vastly® means keeping your soil more organic by adding more humus substances to it. That will lead to better soil health, longer soil life and greater water efficiency.

 **Better Fertilizer Efficiency and Environmental Protection**
Better uptake reduces loss of nutrients to rainfall. Vastly® helps you cut fertilizer application rates, comply with regulatory rules and protect the environment.

 **Greater Food Safety, Longer Shelf Life and Better Taste**
Humus substances reduce translocation of heavy metals and other anthropogenic matters from soil to crops, thus improving food safety. In addition, Vastly® makes harvested crops stay fresh longer and taste better.

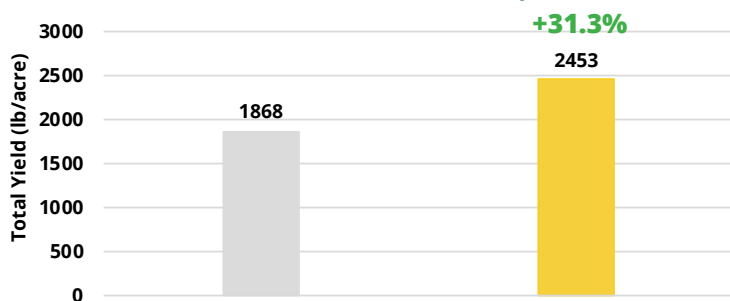
 **Reduced Length of Growth Cycle**
The number of growth days needed are significantly reduced for many crops.

Sunflower Field Trial by Vastly®

By adding Vastly® to your normal fertilization practices, quality, quantity, nutritional content and value of the sunflower are enhanced.

■ Control (Normal Fertilization) ■ Normal Fertilization+ Vastly® 4 gal/acre

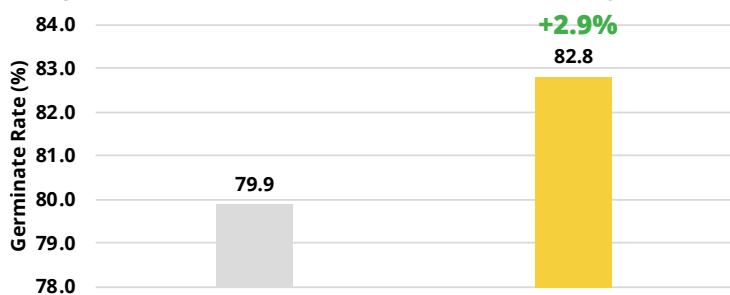
Sunflower Total Yield (lb/acre) Control vs. Vastly®



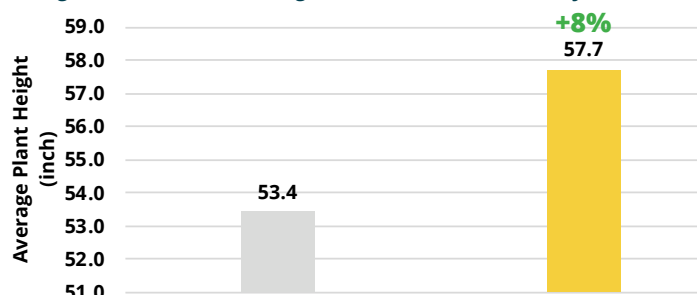
Average Sunflower Thousand Seed Weight (g) Control vs. Vastly®



Average Sunflower Germination Rate (%) Control vs. Vastly®



Average Sunflower Plant Height (inch) Control vs. Vastly®



*Data is based on a sunflower field trial conducted in 2014

5-0-2+ + HUMIC/FULVIC ACIDS

5-0-2 + by Vastly with water-soluble humic/fulvic acids and organic carbon helps improve health and yield of a variety of crops. It is intended for use as a supplement to a balanced fertilization program.

Product Characteristics

Specific Gravity: 1.27

Analysis	International (%)
Nitrogen (N)	5
Potassium (K)	2
Sulfur (S)	5
Fulvic Acid	15
Organic Matter	40

COMMENTS

1. Suitable for application by fertigation, irrigation, and foliar spray.
2. For crop-specific application rates, please contact your local sales representative.