

# Product Evaluation: BioWash 100 Field 2 Trial (In Furrow Treatment + Foliar)

## Manufacturer/Distributor:

The following research evaluates the effectiveness of a product called BioWash 100 produced by 1<sup>st</sup> EnviroSafety, Inc., St. James City, Florida. Robert R. Treloar, retired Professor of Biology, who now farms in Northeastern Iowa, conducted the research. Positive Plant Products, LLC of Fredericksburg, Iowa is the distributor of this product.

## Product Summary:

BioWash 100 is an all-natural product that increases the ability of plant roots to absorb necessary nutrients and water. Tiny particles in BioWash 100 called colloidal micelles carry a negative charge that attract positive charged particles (cations) many of which are fertilizers and essential micronutrients. In previous studies BioWash 100 has been shown to:

- (1) Increase cationic exchange via the root system and the existing soil nutrients
- (2) Enhance translocation of these nutrients throughout the plant
- (3) Act as an adjuvant thus improving the efficacy of other products
- (4) Be a surfactant for improved absorption

## Results from Field 2 Trials with BioWash 100

The purpose of the research was to compare the results of an in furrow application of BioWash 100 and a foliar application of BioWash 100 at corn growth stages V2 and V6. The research also evaluated the effect of increased in furrow application of BioWash 100 to 5 ounces from 3 ounces. The field was divided into plots designated as lanes of 2 acres each. The following table reflects the data collected. The footnotes describe the interpretation of the data in more detail.

Lane	Furrow Application	V2 Application	V6 Application	Yield
L1	3 oz.	0	0	177.59
L2	3 oz.	5 oz.	0	185.75 <sup>1</sup>
L3	3 oz.	5 oz.	5 oz.	186.53 <sup>2</sup>
L4	5 oz.	0	0	185.90 <sup>3</sup>
L5	5 oz.	5 oz.	0	189.27 <sup>4</sup>
L6	5 oz.	5 oz.	5 oz.	190.21 <sup>5</sup>

<sup>1</sup> 8.16 yield increase with 3 oz. in furrow + 5 oz. V2

<sup>2</sup> V6 application had minimal gain (statistically insignificant)

<sup>3</sup> 5 oz. in furrow have same results as 3 oz. in furrow + 5 oz. V2

<sup>4</sup> L5 yield increased (statistically significant) with 5 oz. in furrow at planting + 5 oz. @ V2 (foliar application)

<sup>5</sup> L6 had minimal gain with 5 oz. at V6 stage (statistically insignificant)

### **Interpretations:**

<sup>1</sup> BioWash appears to promote enhanced seminal root system and jump start early nodal root system development. This early vigorous establishment of both root systems suggests more efficient utilization of water and nutrient uptake. The enhanced root density and increased nutrient uptake potential was evidenced by increased yields.

<sup>2</sup> V6 application showed minimal benefit at this stage. However, the multiple applications of BioWash do support a trend of increasing yields. Application stage of growth may need to be adjusted.

<sup>3</sup> Suggests that BioWash 100 is an active promoter of both root systems in early vegetative stages of corn growth. The data suggests that the 5 oz. level of BioWash 100 may be adequate for the VE-V2 stages of growth. Application in the furrow coupled with foliar application suggests that the plant may also be benefited with foliar application at V2. If the weather does not allow in furrow and foliar applications either one has a significant benefit. The determining factor would be the timeliness and quantity of precipitation at these developmental stages.

<sup>4</sup> L4/ L5 data suggest similar results as L1 / L2. There is an increased benefit with split applications of BioWash 100 with similar yield boost.

<sup>5</sup> L4 – L6 data demonstrate the same trend as L1 – L3 data. The increased applications of BioWash 100 do lead to a higher trend in yield.