

Case Study

Soybean Grower Gains \$33.98 per BioWash Dollar

Biostimulants: A Southern Illinois soybean grower designated two comparable fields to measure

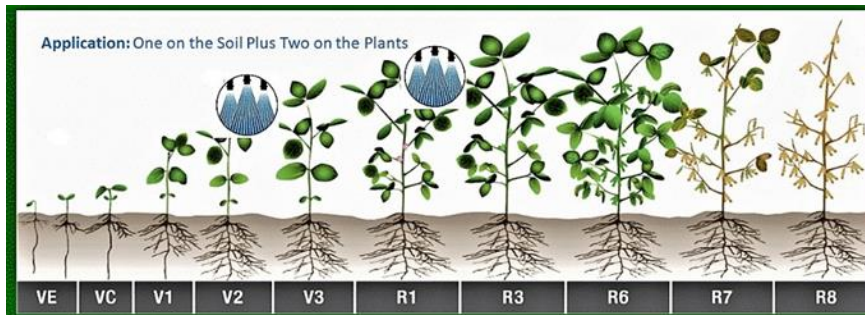


BioWashed 6-Acres

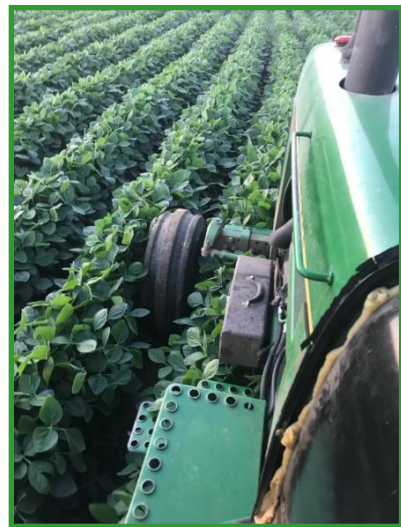


Control 6-Acres

the value of applying BioWash Soil Amendment (SA) and BioWash 100 (BW). PA and BW represent centuries old sustainable agriculture ingredients turbocharged by nanotechnology. They work alongside any growing strategy to restore soil fertility, conserve nutrients, and reduce the need for harsh and hazardous pest control chemicals. SA ground application enhances fertilizer performance by freeing bound up nutrients not taken up by past crops. Cation exchange is increased for maximum water and nutrient uptake. BW plant application works synergistically to increase growth, yield and quality while reducing chemical costs. Michigan State University scientists proved the effectiveness of foliar feeding. They measured a 95% uptake for foliar applied nutrients compared to 10% with nutrients applied to the soil. They demonstrated that applying nutrients to foliage encourages plants to exude more carbohydrates into the root zone, which in turn increases microbial activity in the root area to increase nutrient uptake and circulation in the plants.



Crop History: The field was planted with corn for 5-harvest cycles followed by one season of soybeans. The evaluation took place with second year soybeans. A 10% back-to-back soybean yield reduction from 32-34-inch plants was expected. Expectations were exceeded.



Planting and Early Growth: Two 6-acre matching fields



were set aside for the test. Liberty Link[®] soybean seed from Great Heart Seed was planted during late April. SA was sprayed after a 6-8-inch cultivation. This was followed by two applications of BW at the V2 - V3 and the R1 Stages. Budding started 12-24 hours after the second plant spray. At that point it is not possible to enter the field to spray without



causing a 3-5 bushel per acre crop loss. (A pylon system or aerial spraying is being considered, to determine the cost effectiveness of added sprays for future crops.)



Expectations Exceeded



Table 1: BioWash Cost

Product	Apps	oz./acre	\$/oz.	\$/acre
Soil Amendment	1	7	1.33	\$9.31
BioWash 100	2	5	1.12	\$11.20
BioWash Growing Cycle Total Cost/Acre				\$20.51

Table 2: BioWash Value

2018 Treated Field Acreage Yield (bu.)	106
Control Field Yield (bu.)	65
Difference (bu.)	41
Soybeans \$\$/bu.	\$17.00
Gross Value of Increased Bushels/Acre	\$697.00
Soybean Dollars per BioWash Dollar	\$33.98

<https://markets.businessinsider.com/commodities/soybeans-price>

Early July pictures begin to tell the story. The biostimulants the difference between the plant on the left and the one on the right. Growth indicated the 2018 crop yield will not be less than the 2017 89-bushells per acre. The grower thinks soybeans will reach 5-6 feet by the season's end. Stems are already thumb sized. Plant closeup photos (control on the left with biostimulant plants on the right) show a

significantly greater number of pods.

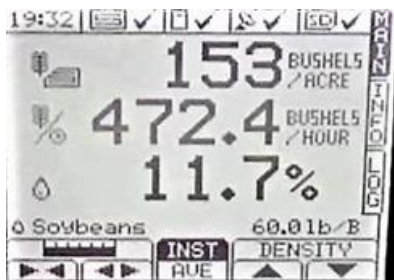
Late July: BioWashed plants are significantly taller than those in the control field. The grower counted 204 beans on a representative plant. The plants were five feet tall with weeks to go before harvest. Treated plants had a significantly greater number of pods. Based upon 65 pods observed on a typical plant and using the usual 65,000 plants per acre, the yield estimate indicates the likelihood to exceed the 100 bu./acre.

Harvest Reports: Table 2 shows the treated 6-acres produced a yield of 106 bu./acre. This far exceeds expectations from this second-year soybean crop of a reduced 6.5 bu./acre (10% reduction) less than the 65-bushel 2017 farm average. \$33.98 was returned for each BioWash dollar using \$17 soybeans. Combining soil and plant testing with crop observation can be expected to show added benefits from agrichemicals reduction.

The SA ground spray followed by two BW plant applications have the following benefits:

- ✚ Better root systems.
- ✚ Improved growth and resiliency.
- ✚ Healthier, sturdier, more pest/ disease-resistance plants.
- ✚ Greater resistance to drought.

The outcome is higher yield and better quality.



Grow with Us

Contact us for specifics for your farm:

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<https://www.BioWash.com>