

Soybeans

Field Crops Nutrient Enhancers Value



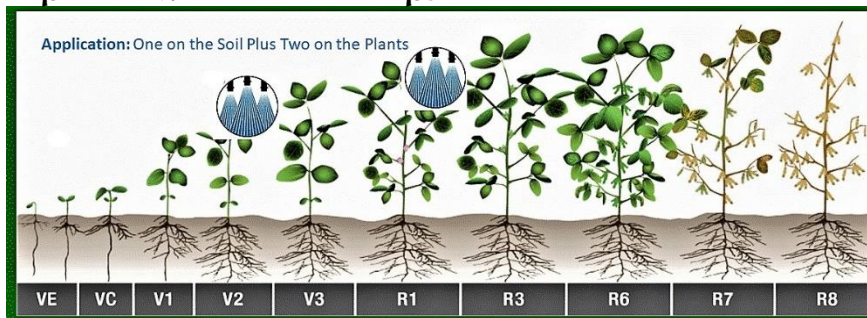
Soybean Grower Success Story Planting and Early Growth

Liberty Link® soybean seed from Great Heart Seed was planted during late April. It was treated with Soil Spray at 5 ounces per acre in 20-gallons of water after a 6-8-inch cultivation. Ground application increases cation exchange to significantly improve water and nutrient uptake. This was followed by two applications of a 20-gallon water dilution of Plant Spray 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 is being considered, so additional sprays will be possible if for future crops.)

History

The field was planted with corn for 5-years. This evaluation is the second year of soybeans. So, a 10% back-to-back soybean yield reduction is normally expected from 32-34-inch plants.



Early July

Growth to date indicates to the grower the 2018 crop yield will not be less than the 2017 89-bushells per acre. The Control and Treated plant size and height photos show why. 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 that nutrient uptake too.



The side-by-side treated, and control photos show the Nutrient Enhancers' value. The July pictures tell the story. A leaf is touching 50 inches on the tape. The grower posed photos shows nearby plants without Nutrient Enhancer application.



- Ø Applications have the following benefits:
- Ø Substantial yield increases.
- Ø Better root systems.
- Ø Improved growth and stamina.
- Ø Healthier, sturdier, pest and disease-resistance plants.
- Ø Greater resistance to cold damage and drought.



The grower thinks soybeans will reach 5-6 feet by the season's end in three months. Stems are already thumb sized. Plant closeup photos (control on the left with Nutrient Enhancer plants on the right) show a significantly greater number of pods. Based upon 65 pods observed on a typical plant and using the usual 65,000 plants per acre, his yield

estimate indicates the likelihood to exceed the 109 bu/acre IL existing record.

Late July

Nutrient Enhancers treated 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 1 shows the GreenSafe™ 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. \$21.06 was returned for each Nutrient Enhancer dollar. Soil testing and crop observation can be expected to show added benefits potential from agrichemicals reduction.



Table 1: GreenSafe™ Cost

Nutrient Enhancer	\$\$/gal.	Apps	tot. oz. acre	\$\$ oz.	\$\$ acre
Soil Spray	\$200	1	5	\$1.56	\$7.81
Soliar Spray	\$200	2	10	\$1.56	\$15.63

GreenSafe™ Total Cost per Acre \$23.44

Table 2: GreenSafe™ Value

2018 Treated Field Acreage Yield (bu.)	106
Control Field Yield (bu)	65
Difference (bu.)	41
Soy \$\$/bu. \$8.83 + 80¢ gov. subsidy	\$14.78
Gross Value of Increased Bushels	\$605.98
Soybean Dollars per Green Safe Dollar	\$25.86

