

Huma® Program Increases Soybean Yields 21%, With an ROI of 389%

Field Trial

Conducted by: Agricenter International, Memphis, Tenn.
Huma® Products: Lucky 7®, Breakout®, Vitol®

Objective

This field trial assessed the effects of 2 foliar applications of 2 combinations of Huma® products versus a control during the growing season on the yield of soybeans (*Glycine max*, variety AG48X7) when compared with the grower's standard crop nutrition program.

Materials & Methods

This trial was set up in a complete randomized-block design of 10' x 30' plots replicated 4 times, conducted during the growing season of June through November in an area near Memphis, Tenn. Two treatment programs and a control were compared; all three groups received a treatment of grower's standard fertilizer, plus 22 oz/ac of Roundup (herbicide) at growth stage VC and 7 oz/ac of Quadris (fungicide) at growth stage R1. In addition, the 2 treatment groups also received one of the foliar-applied treatment combinations of Huma® products listed in Table 1 at growth stages VC and R1: **Lucky 7®** is a 7-7-7+micros nutrient, **Vitol®** and **Breakout®** are natural plant growth manager products (**Vitol®** for vigorous growth, **Breakout®** for improved flowering and fruiting). Data were analyzed using ARM (Agricultural Resource Management) software.

Table 1. Treatments, Products, and Average Yields

Treatments	Date: 06/28 Growth Stage: VC Products/ac	Date: 08/01 Growth Stage: R1 Products/ac	Average Yield bu/ac
Control	Grower's Standard	Grower's Standard	57.03
Treatment 1	1 qt Lucky 7® 1 qt Vitol®	1 qt Lucky 7® 1 qt Vitol®	63.35
Treatment 2	1 qt Lucky 7® 1 qt Breakout®	1 qt Lucky 7® 1 qt Breakout®	69.25

Table 2. Treatments, Total Cost, Total Gain, and Net Return

Treatments	Total Product Cost/ac	Total Gain: Yield/ac at \$10/bu	Net Return (\$/ac)
Control	—	\$570.25/ac	\$562.96/ac
Treatment 1	\$26.00/ac	\$633.50/ac	\$607.50/ac
Treatment 2	\$25.00/ac	\$692.50/ac	\$667.50/ac

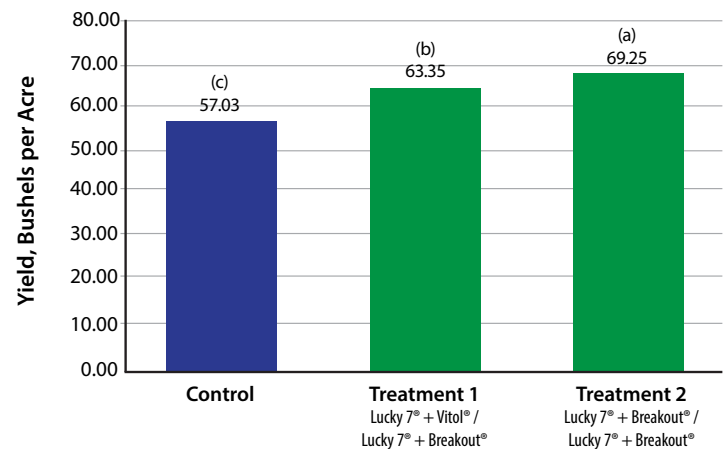


Figure 1. Total Soybean Yield per Acre (bushels), Control vs. 2 Huma® Treatment Combinations. *Treatments with different letters at the tops of their bar graphs were significantly different (P=0.05).*

Results

Treatment costs, gains, and net return are detailed in Table 2.

Fig. 1 shows that the yield for Huma® Treatment 2 was statistically determined to be significantly greater (a) than for Huma® Treatment 1 (b), which was in turn statistically significantly greater than the yield for the control (c).

Conclusions

Based on the data collected in this trial, the Huma® Treatment Program 2 (1 qt/acre of both **Lucky 7®** and **Breakout®** at growth stages VC and R1) resulted in the highest yield at 69.25 bushels per acre, a **yield increase of 21%** over the control. At an application cost of \$25.00/acre and an increase of 12.23 bu/ac over the control, with a market price of \$10.00/bushel this results in a net return-to-the-farm increase of **\$97.30 per acre**—a return on investment (ROI) of **389%**.

Of the Huma® products and product combinations applied in this trial, the combination of **Lucky 7®** and **Breakout®**, applied at 1 qt/ac at growth stage VC and again at growth stage R1, was a cost-effective treatment for increasing soybean yields.

It is recommended for future soybean field trials that tissue/leaf analysis be conducted at significant growth stages to more precisely determine the type and amounts of Huma® soil and plant nutrient products that are needed to achieve the best soybean yields.