Fall Soil Application of Fertil Humus® Increases Illinois Corn Yield and ROI

Research Report

Research Conducted by: Tim Smith, Owner and Managing Agronomist, Cropsmith, Inc., Farmer City, Illinois

Background

Feeding beneficial soil fungal activity can enhance aerobic decomposition of organic matter and build a humus-rich soil that releases nutrients tied up in crop residues. This can positively impact crop yield and lead to a higher return on investment.

Objective

The objective of this study was to observe how a fall application of Huma® **Fertil Humus®**, a liquid soil humus builder, would affect corn production.

Materials & Methods

The corn (hybrid: DKC5981) was planted at 35,000 seeds/acre with row spacing of 30 inches at a research site near Farmer City, Illinois, on May 6 under dry land conditions. Each 4-row plot was 10 feet wide and 40 feet long. Three treatments were arranged in a randomized complete block design with four replications (Table 1).

The grower standard fertilizer program (GS) included the fall application of two fertilizers: MESZ (12-40-0, 10 S, 1 Zn) at 100 lb/acre, and potash at 100/lb acre. In addition, 80 lb/acre of N was applied at planting, and then later at V4 the crop was side-dressed with another 80 lb/acre of N. Two different rates of **Fertil Humus®** were applied in the fall (Table 1). The crop was harvested on September 28.

Table 1. Treatment Description, Method, and Timing.

Treat-ment	Description	Amount/ acre	Method	Timing
1	Grower Standard Fertilizer (GS)	GS	GS	Fall and Spring
2	GS + Fertil Humus®	1 pint/a	Soil sprayed	Fall
3	GS+ Fertil Humus®	1 quart/a	Soil sprayed	Fall

Results

Fall treatment of soil with **Fertil Humus®** at low and high rates resulted in higher corn yield compared with the grower standard. **Fertil Humus®** at 1 pint/acre and at 1 quart/acre gave 4% and 5%, respectively, higher yields than the grower standard (Figure 1).

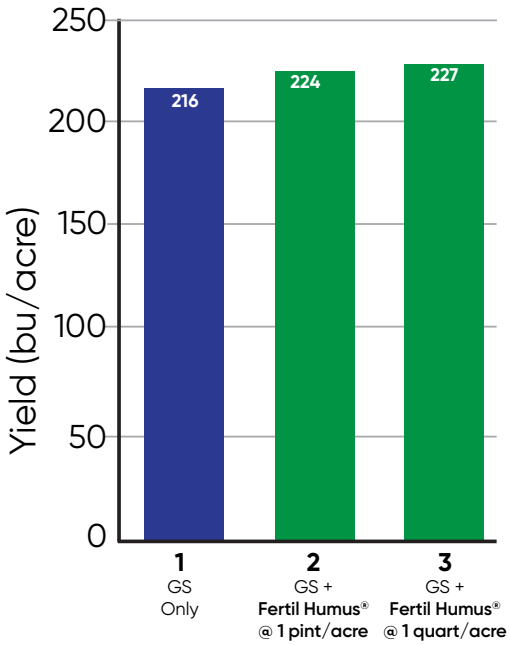

Figure 1. Fertil Humus® effect on corn yield from fall soil treatment

Conclusions

Fall treatment of soil with **Fertil Humus®** improved corn yield, resulting in $29/acre (**Fertil Humus®** at 1 pint/acre) and $31/acre (**Fertil Humus®** at 1 quart/acre) net income advantages over the grower standard practice. This net income gave an ROI of 3x and 2x, respectively.

Product Description

Huma® **Fertil Humus®**—with 24% total nitrogen, 0.10% Iron, 0.05% manganese, 0.05% zinc, and carbon-complexed with Micro Carbon Technology®—has the nutrients necessary to feed beneficial fungal activity in the soil and to increase carbon and nutrient availability in the root zone. **Fertil Humus®** enhances aerobic decomposition of organic matter and builds a humus-rich soil, which releases nutrients tied up in organic residues. **Fertil Humus®** also helps buffer plants from the effects of heavy metals and toxic substances in the soil.

1331 W. Houston Avenue, Gilbert, AZ 85233 | 800.961.1220 | Fax 480.425.3061 | info@huma.us | www.huma.us