

Starter Fertilizer and Three Rates of Vitazyme® at Planting on Soybeans

Study ID: 114023201601

County: Butler

Soil Type: Hastings silt loam 0-1% slope

Planting Date: 6/2/16

Harvest Date: 10/24/16

Population: 156,000

Row Spacing (in): 36

Hybrid: Pioneer P28T08R-S426

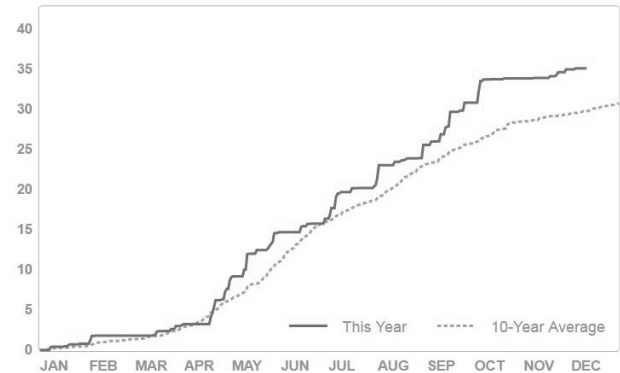
Reps: 4

Previous Crop: Corn

Tillage: No-Till

Herbicides: *Post:* 0.6 oz/ac Cadet® and 33.6 oz/ac Roundup® on 6/29/16

Irrigation: Pivot, Total: 4.88 in
Rainfall (in):



Introduction: Differing rates of biostimulants can potentially result in different levels of plant responses. This study was conducted to compare and document soybean response to three rates of Vitazyme® in combination with starter fertilizer. Product information for Vitazyme is at right. Starter fertilizer was Begin, a 7-23-4-0.25 Zn product applied at 6.65 gpa. The solution was 60% Begin and 40% water. Actual nutrient supplied were 3.1 lb/acre of actual N, 10.2 lb/acre of actual P, 1.8 lb/acre of actual K, and 0.1 lb/acre of actual Zn.

VITAZYME[®]
an All Natural Biostimulant Concentrate

VITAZYME is an all natural biostimulant that works through multiple active agents and multiple modes of action. Vitazyme stimulates the indigenous soil microbiota to work more efficiently, thus improving the availability of soil nutrients.

Commercial applications: Apply as a foliar spray, or via drip or sprinkler irrigation to plants every 30 to 45 days. Utilize 13 ounces/acre (1 liter/hectare) per application, or about 0.3 to 0.5 ounces/1,000 ft². Base dilution rates on sprayer calibration and irrigation system output.

Safety Instructions: Vitazyme is environmentally safe and non-toxic to plants, animals, and people when used as directed.

Caution: Keep out of reach of children.

Contents: Treated water concentrate, kelp extractives, calcium lignosulfonate, ascorbic acid.

**— NOT A PLANT FOOD PRODUCT —
SHAKE WELL BEFORE USING**

2.5 gal (9.46 lt) • Net weight: 21 lbs (9.53 kg)
Manufactured by Vital Earth Resources,
P.O. Box 1148, Gladewater, Texas 75647, U.S.A.
www.vitalearth.com

Product information from:

<http://www.greenearthgandturf.com/vitazyme-label.pdf>

Results:

	Stand Count			Chlorophyll Meter
	June 9	June 12	June 22	June 22
Check	94,970 A*	116,886 A	128,381 AB	37.2 B
Starter	77,728 B	107,494 B	119,125 C	40.0 A
Starter + 7 oz/ac Vitazyme	84,716 AB	112,167 AB	120,032 BC	39.7 A
Starter + 13 oz/ac Vitazyme	84,443 AB	114,209 AB	131,043 A	40.2 A
Starter + 26 oz/ac Vitazyme	76,457 B	116,070 AB	124,812 ABC	39.4 A
P-Value	0.0649	0.0981	0.0136	0.0003

	Yield (bu/acre)†	Protein (%)	Oil (%)	Seeds per lb	Marginal Net Return‡
Check	67 A	37.5 A	19.8 A	2,222 A	\$619.75
Starter	66 A	38.0 A	19.4 AB	2,228 A	\$597.53
Starter + 7 oz/ac Vitazyme	67 A	37.9 A	19.2 B	2,209 A	\$602.73
Starter + 13 oz/ac Vitazyme	67 A	37.7 A	19.5 AB	2,214 A	\$599.26
Starter + 26 oz/ac Vitazyme	67 A	37.6 A	19.7 AB	2,210 A	\$591.75
P-Value	0.7672	0.709	0.0661	0.9694	N/A

*Values with the same letter are not significantly different at a 90% confidence level.

†Bushels per acre corrected to 13% moisture.

‡Marginal net return based on \$9.25/bu soybean, \$12.97/ac starter fertilizer cost, and \$0.58/oz Vitazyme.

Summary: There were some differences in plant height; however, none of the treatments tested had greater yield, percent oil, percent protein, or seeds per acre than the untreated check. The chlorophyll meter readings in June 22 were significantly lower for the check when compared to all other treatments including the starter alone and starter with Vitazyme.

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