

## Vital Earth Resources

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# 2003 Crop Results

## Vitazyme on Zoysia Grass

**Researcher:** Eddie Pearson, Vital Earth Resources

**Research Farm:** Fulton Grass Farm, Hope, Arkansas

**Variety:** Zoysia

**Soil type:** heavy clay

**Experimental design:** A portion of a zoysia grass sod field was treated with Vitazyme to give an approximate standard application. The remainder of the field was left untreated.

### 1. Control

### 2. Vitazyme

**Fertilizer treatment:** unknown

**Vitazyme treatments:** 13 oz/acre on July 23, 2003 (3.5 gal of Vitazyme in 250 gal of water)

**Growth results:** The sod was sampled on August 25, 2003, 33 days after treatment. A 3-inch diameter coring device was used to obtain four cores from each side of the boundary. These cores were carefully washed free of soil and weighed after blotted dry with paper towels to get fresh weight, then dried in a drying oven for 24 hours at 130°F to obtain dry weight. Statistical analyses were performed using Cohort software.

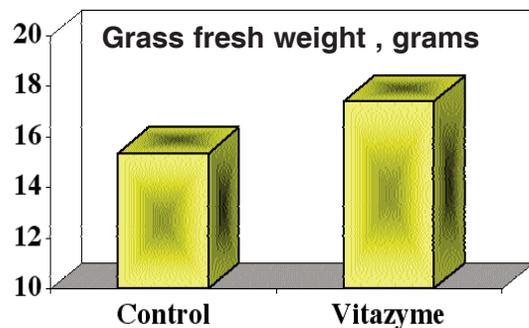
**General Observations:** The Vitazyme treated sod 33 days after treatment was **better knit together by vigorous roots** so that the samples, after washing, remained tied together in their original form. The untreated control samples were very loose and became disorganized on washing. Also, the treated plants were **darker green** indicating **more chlorophyll** in the leaves, and thus more carbon and sunlight-fixing capacity.

### Fresh Weight

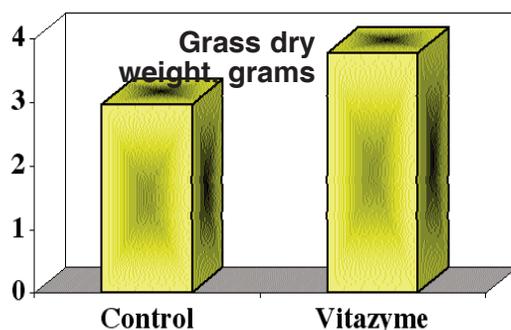
Treatment	Fresh weight*	Weight change
	----- grams -----	
Control	15.35 b	—
Vitazyme	17.39 a	1.04 (+7%)

\*Means followed by the same letter are not significantly different according to the Tukey-Kramer Test. Level of significance=0.015.  $LSD_{0.10}=0.96$  gram.

**Increase in fresh weight: 7%**



### Dry Weight



Treatment	Dry weight*	Weight change
	----- grams -----	
Control	2.96 b	—
Vitazyme	3.76 a	0.80 (+27%)

\*Means followed by the same letter are not significantly different according to the Tukey-Kramer Test. Level of significance=0.0007.  $LSD_{0.10}=0.13$  gram.

**Increase in dry weight: 27%**

Conclusions: After only 33 days of Vitazyme influencing the growth of this zoysia grass, the following conclusions can be made:

- Vitazyme at 13 oz/acre increased the fresh weight of the grass by 7%.
- Vitazyme increased the dry weight of the grass by 27%.
- The zoysia grass contained a considerably higher level of dry matter in the leaf and root tissue after only 33 days of Vitazyme effects, shown by the 27% greater dry weight but only 7% greater fresh weight. More carbon compounds and minerals were being fixed in the plants after the active agents of Vitazyme began stimulating plant metabolism.