Trial Results

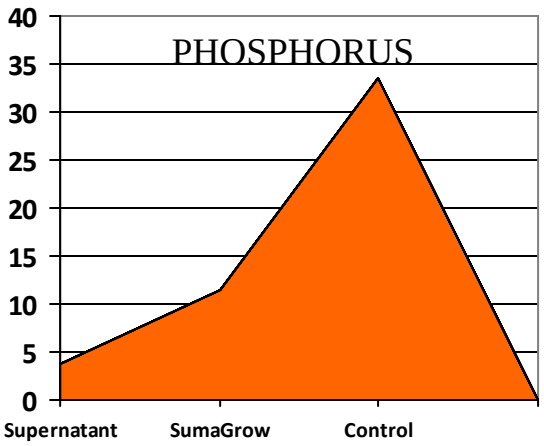
Executive Summary

Phosphorus Reduction

Mississippi

Research on the effect of products containing SumaGrow on *Phosphorus Reduction*

Total Phosphorus		
Treatment	**Total P**	**% decrease over control**
Supernatant (SumaGrow)	3.8	88.66%
Treated soil (SumaGrow)	11.5	65.67%
Untreated soil (control)	33.5	N/A



Trial Summary

A rancher in Mississippi asked Bio Soil Enhancers, Inc. (BSEI) to test the effect of a product containing SumaGrow on phosphorous (P) removal from his soil. He sent samples of his soil to Bio Soil to determine if SumaGrow products would aid in the removal of P as his soil phosphorous exceeded the allowable limits (15 ppm).

The technology of SumaGrow can mobilize and solubilize phosphorous (P) at both high and low soil pH environments and help make it available for plant uptake. The soil sample that was brought to the BSEI office was air dried first and then a random soil sample was taken for SumaGrow treatment.

EXPERIMENTAL SET-UP:

Ten grams of the soil sample was weighed and put into a 1000mL Erlenmeyer flask.

500mL of SumaGrow liquid was added and incubated on an Orbital Shaker for 2 weeks at 30oC.

After 2 weeks, the treated soil was filtered using sterile gauze and the residual soil was dried in an incubator at 40^{o}C. The drying continued until a constant weight was achieved.

Samples of the untreated (control) soil, the dried *SumaGrow* soil, and the liquid filtrate were sent to EDL Labs, Inc. for total P content analysis. The results are indicated in the above chart and graph.

The average reduction, combing both the treated soil and supernatant, **shows 77.16% of the phosphorous was been converted to phosphate and available for plant uptake.**

Bio Soil Enhancers
1161 James Street
Hattiesburg, MS 39401

Office: 601-582-4000
Toll Free: 877-888-2744
Fax: 866-888-2744

sumagrow.com
info@sumagrow.com