



28 Tradition Circle
Egg Harbor Township, NJ 08234
(609) 225-6380

The following test for phosphorous (P) removal was conducted for a farmer in Mississippi who uses chicken litter as his primary source of nutrient for his cattle pastures. He sent samples of his soil to Bio Soil Lab (Hattiesburg, MS) to determine if our SumaGrow inside would aid in the removal of P as his soil phosphorous exceeds the allowable limits for using chicken litter as a source of fertilizer.

One of the primary claims is that products with SumaGrow inside will mobilize and solubilize phosphorous (P) at both high and low soil pH environments and make it available for plant uptake.

The soil sample that was brought to the Bio Soil Lab was air dried first and then a random soil sample was taken for SG treatment.

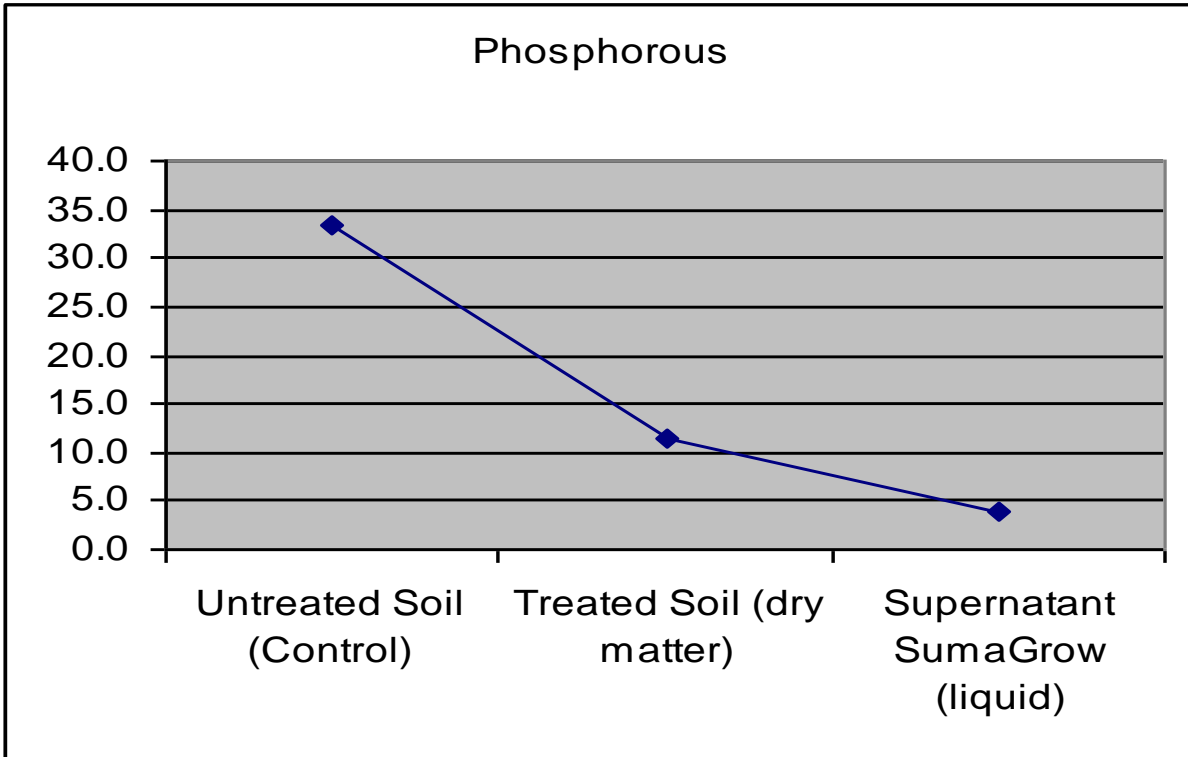
Experimental set-up:

- Ten grams of the soil sample was weighed and put into a 1000mL Erlenmeyer flask.
- 500mL of SG liquid was added and incubated on an Orbital Shaker for 2 weeks at 30°C.
- After 2 weeks, the treated soil was filtered using sterile gauze and the residual soil was dried in an incubator at 40°C. The drying continued until a constant weight was achieved.
- The untreated (control) soil, the dried SG soil, and the liquid filtrate were sent to EDL Labs, Inc. for total P content analysis. The results are presented here::

Soil Analysis:

<u>Treatments</u>	<u>Total P</u>	<u>% decrease over control</u>
1. Untreated soil (control)	33.5	N/A

2. Treated soil (SG) after 2 weeks (dry matter)	11.5	65.67%
3. Supernatant SG (liquid) after treatment	3.8	88.66%



Summary: When we average the 11.5 for the dry soil and the 3.8 of the extracted liquid, we have a total phosphorous analysis of 7.65. If we subtract the 7.65 from the control 33.5, we are left with 25.85, or 77.16% of the phosphorous that has now been converted to phosphate and available for plant uptake.