

**NANOSTRUCTURED BIOINPUTS (SOIL CONDITIONER) ENRICHED WITH  
*Lactobacillus plantarum* UTILIZING FRUIT AND PEEL OF SABA BANANA  
(*Musa acuminata x balbisiana*) AS SOURCE OF POTASSIUM AND SEEDS  
OF SQUASH (*Cucurbita maxima*) AS SOURCE OF PHOSPHORUS**

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## **BIOGRAPHICAL SKETCH**

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## ABSTRACT

**SALVIEJO, RECAMIE S.**, Department of Biological Sciences, College of Arts and Sciences, Central Luzon State University, Science City of Munoz, Nueva Ecija, Philippines, **JUNE 2018, NANOSTRUCTURED BIOINPUTS (SOIL CONDITIONER) ENRICHED WITH *Lactobacillus plantarum* UTILIZING FRUIT AND PEEL OF SABA BANANA (*Musa acuminata x balbisiana*) AS SOURCE OF POTASSIUM AND SEEDS OF SQUASH (*Cucurbita maxima*) AS SOURCE OF PHOSPHORUS**

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This study was conducted to determine the total NPK content of each treatment and the bacterial count of the initial and final process. The treatments were prepared by following the treatments list.

Results of the analysis revealed that treatment with Fish Amino Acid alone proves to be the best treatment since it gives the highest numerical value in NPK. The incorporation of the phosphorus and potassium of the plant samples and bacteria in combination work together, shows values on Nitrogen, Phosphorus and Potassium that is lower than the control (FAA). Nitrogen, Phosphorus and Potassium of treatment with FAA and treatment with FAA and *L. plantarum* are not significantly different with each other.

The change of the number of bacterial growth from the initial to final counting in treatment with FAA; treatment with FAA, phosphorus, potassium and silica and treatment with FAA, phosphorus, potassium, silica and *L. plantarum* are increasing while treatment with FAA and *L. plantarum*; treatment with FAA, phosphorus and potassium and treatment with FAA, phosphorus, potassium and *L. plantarum* decrease its growth of increment.

This leads to the analysis that the best treatment in NPK content is treatment with FAA alone and the best treatment that has the highest bacterial count is observed in treatment with FAA, phosphorus, potassium, silica and *L. plantarum*.

This study shows that the addition of *L. plantarum* is efficient to increase the NPK content compare to the other enhancers while the addition of silica increases the growth of bacterial population. Moreover, the plant material used in this study has antibacterial property which made the bacterial count to decrease and allowed the fermentation process slows down. The addition of plant extracts did not increase the total NPK due to the synergistic effect because the plant extract has an antibacterial property.

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