

Janitta Sukijpaneenij 2014: Effect of Humic Acid Extracted from Leonardite on Growth and Nutrient Contents of Sugarcane (*Saccharum officinarum* L.).

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Soil used for sugarcane cultivation over a period of time had a low nutrient fertility and it caused the decrease of sugarcane productivity. Humic acid, a soil conditioner was reported to increase plant nutrients absorption and improve soil properties. The study on humic acid (HA) extracted from leonardite Mae Moh Mine, Lampang province, application with chemical fertilizer (NPK) on nutrients uptake and growth of sugarcane var. LK92-11 was determined. The results showed that soil nutrient contents before planting were inadequate level for sugarcane. On the 3rd month, treatment of NPK 75% application with HA 25 kg/rai gave calcium content in soil higher than the other treatments while treatment of NPK 75% with HA 50 kg/rai gave iron content in soil higher than the treatments only HA or NPK. On the 6th month, treatment of NPK 75% application with HA 50 kg/rai gave phosphorus and potassium contents higher than the treatment with NPK 100% and the treatment with only HA. The study on nutrient contents in sugarcane leaves found that NPK 75% with HA 50 kg/rai gave phosphorus content higher than the treatments of HA or NPK on the 3rd month. On the 6th month, the combination of NPK with HA gave nitrogen contents more than the treatment of only HA. The study on vegetative growth found that the height and SPAD index of the treatments combination of HA with NPK were higher than only HA or NPK treatments. The harvest data showed that the treatment of NPK 100% gave yield and sugar quality higher than treatments of only HA or combination of HA with NPK.

Student's signature

Thesis Advisor's signature