

**THE EFFECT OF SOIL ENHANCERS ON DENSITY, VOLUME WEIGHT, SOIL POROSITY, AND SUGARCANE SEEDLING GROWTH (*Saccharum officinarum* L) IN SANDY CLAY SOILS**

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**ABSTRACT**

The research aims to determine **The Effect Of Soil Enhancers On Specific Gravity, Volume Weight, Soil Porosity And Growth Of Cane (*Saccharum Officinarum* L.) Seedlings In Sandy Clay Soils**. This research was conducted at Sumuran Field, Ajung Sub-District, Jember, East Java Province. The timing of the research was carried out from January 2018 to April 2018. One factorial research method was arranged based on a completely randomized design (CRD) pattern. The combination of treatments is 8, namely P0 = Soil (control), P1 = Soil + Green Fertilizer = 1: 1, P2 = Soil + Chicken Manure = 1: 1, P3 = Soil + Cow Manure = 1: 1, P4 = Land + Green Fertilizer + Chicken Manure = 2: 1: 1, P5 = Land + Green Fertilizer + Cow Manure = 2: 1: 1, P6 = Soil + Chicken Manure + Cow Manure = 2: 1: 1, P7 = Land + Green Fertilizer + Chicken Manure + Cage Fertilizer, Cattle = 3: 1: 1: 1. The results of the study show that soil enhancers have a significant effect on soil volume weight, soil porosity, and soil specific gravity. While the growth of sugarcane seedlings of plant height was significantly different only in the second month the rest was not significant and the diameter of the sugarcane stem was different was not significant both the 2nd and 4th months. The combination of green manure, manure (chicken), manure (cow) on the soil are organic materials that can improve specific gravity, volume weight, and increase soil porosity.

**Keywords:** Soil Improvement Against Specific Gravity, Weight Volume, Soil Porosity, Sugarcane Seedlings (*Saccharum officinarum* L) in sandy clay soil