ABSTRAK

BIOMASSA KARBON MIKROORGANISME (C-MIK) PADA PERTANAMAN NANAS DI TANAH ULTISOL LAMPUNG TENGAH SETELAH PEMBERIAN PUPUK *COMPOUND* DENGAN PERBEDAAN TEKNIK DAN DOSIS

OLEH

JONAH FEBRIANA

Biomassa karbon mikroorganisme tanah (C-mik) merupakan salah satu indikator kesuburan tanah secara biologi yang dipengaruhi juga oleh penggunaan pupuk pada tanah. Pupuk Compound yang digunakan merupakan pupuk produksi PT GGP (Great Giant Pineapple) dengan campuran dari bahan organik dan anorganik yang mengandung unsur hara makro dan mikro yang diharapkan dapat melengkapi kebutuhan hara dan meningkatkan biomassa karbon mikroorganisme tanah. Tujuan dari penelitian ini adalah untuk mempelajari pengaruh teknik aplikasi pupuk *Compound*, dosis pupuk *Compound*, dan interaksi antara teknik aplikasi dan dosis pupuk *Compound* terhadap biomassa karbon mikroorganisme tanah (C-mik) pada pertanaman nanas di tanah Ultisol, serta mempelajari korelasi antara biomassa karbon mikroorganisme (C-mik) dengan C-organik, pH tanah, kadar air, dan suhu tanah. Penelitian ini dilaksanakan di PT. GGP dan analisis tanah dilakukan di Laboratorium Biologi Ilmu Tanah, Universitas Lampung menggunakan rancangan split plot yang terdiri dari 9 perlakuan dan 4 ulangan. Data dianalisis dengan analisis ragam dan uji tukey dilanjutkan dengan uji BNT taraf 5%. Hasil penelitian menunjukan teknik aplikasi pupuk *Compound* secara tugal mampu meningkatkan C-mik dibandingkan teknik aplikasi secara broadcast dan larikan. Hasil interaksi menunjukkan perlakuan teknik aplikasi secara tugal + dosis pupuk *Compound* 4,5 ton ha^{-1} nyata lebih tinggi dibandingkan perlakuan lainnya. Uji korelasi menunjukan bahwa tidak adanya korelasi antara C-mik dengan C-organik, pH, kadar air, dan suhu tanah.

Kata Kunci : Biomassa karbon mikroorganisme tanah (C-mik), pupuk *Compound,* teknik aplikasi

ABSTRACT

BIOMASS CARBON MICROORGANISM (C-MIC) IN PINEAPPLE PLANTING IN ULTISOL CENTRAL LAMPUNG AFTER APLICATION *COMPOUND* FERTILIZER WITH DIFFERENT TECHNIQUES AND DOSAGES

BY

JONAH FEBRIANA

Biomass carbon of soil microorganisms (C-mic) is an indicator of soil fertility biologically which is also influenced by the use of fertilizers in the soil. The compound fertilizer used is a fertilizer produced by PT GGP (Great Giant Pineapple) with a mixture of organic and inorganic materials containing macro and micro nutrients which are expected to be able to supplement nutrient needs and increase the carbon biomass of soil microorganisms. The purpose of this study was to study the effect of compound fertilizer application techniques *compound*fertilizer dosages ,, and the interaction between application techniques and *compound* on the carbon biomass of soil microorganisms (C-mik) in pineapple plantings in Ultisol soil, as well as to study the correlation between the carbon biomass of microorganisms. (C-mic) with C-organic, soil pH, water content, and soil temperature. This research was conducted at PT. GGP and soil analysis were carried out at the Soil Science Biology Laboratory, University of Lampung using a split plot design consisting of 9 treatments and 4 replications. Data were analyzed by analysis of variance and tukey test followed by LSD test at 5% level. The results showed that the single application technique of *compound* was able to increase C-mic compared to the broadcast and array application techniques. The results of the interaction showed that the application technique using the tugal method + *compound* 4.5 tons ha^{1} was significantly higher than the other treatments. The correlation test showed that there was no correlation between C-mic and C-organic, pH, moisture content, and soil temperature.

Keywords: Biomass carbon soil microorganism (C-mik), *compound fertilizer,* technique application.