

RINGKASAN

Penelitian ini dilaksanakan di Kebun Percobaan Fakultas Pertanian Universitas Islam Sumatera Utara, Kelurahan Gedung Johor, Kecamatan Medan Johor, Kota Medan, Provinsi Sumatera Utara dengan ketinggian tempat ± 25 mdpl dan topografi datar. Penelitian dilaksanakan pada bulan November 2023 sampai dengan bulan Januari 2024.

Penelitian ini dibimbing oleh Ir. Ibu Chairani Siregar, M.P. sebagai ketua pembimbing dan Ibu Ir. Mindalisma, M.M. sebagai anggota pembimbing. Penelitian ini bertujuan untuk menguji peningkatan C-Organik tanah untuk hasil tanaman Kedelai Varietas Edamame melalui pemberian POC keong mas dan abu janjang kelapa sawit pada tanah Inceptisol. Penelitian ini menggunakan rancangan acak kelompok (RAK) factorial dengan dua factor perlakuan yaitu POC keong mas dan abu janjang kelapa sawit. Faktor pertama yaitu : POC Keong mas terdiri dari 4 taraf yaitu : K_0 = kontrol, K_1 = 100 ml/polybag, K_2 = 200 ml/polybag, K_3 = 300 ml/polybag. Faktor kedua yaitu : Abu janjang kelapa sawit terdiri dari 4 taraf yaitu : A_0 = kontrol, A_1 = 50 g/polybag, A_2 = 100g/polybag, A_3 = 150 g/polybag. Parameter yang diamati adalah tinggi tanaman, jumlah cabang, diameter batang, jumlah bintil akar, jumlah polong, bobot polong, dan kadar C-organik pada tanah.

Hasil penelitian menunjukkan bahwa pemberian POC keong mas berpengaruh nyata terhadap tinggi tanaman, jumlah cabang, diameter batang, jumlah bintil akar, jumlah polong, bobot polong, dan kandungan c-organik pada tanah. Pemberian abu janjang kelapa sawit berpengaruh nyata terhadap tinggi tanaman, jumlah cabang, diameter batang, jumlah bintil akar, jumlah polong, bobot polong, dan kandungan c-organik pada tanah. Untuk interaksi POC keong mas dan abu janjang kelapa sawit berpengaruh nyata terhadap jumlah bintil akar, jumlah polong, dan bobot polong.

Kata Kunci: *Tanaman Kedelai Varietas Edamame, Pupuk Organik Cair Keong Mas, Abu Janjang kelapa sawit, C-organik.*

SUMMARY

This research was carried out at the Experimental Garden of the Faculty of Agriculture, Islamic University of North Sumatra, Gedung Johor Village, Medan Johor District, Medan City, North Sumatra Province with an altitude of ± 25 meters above sea level and flat topography. The research was carried out from November 2023 to January 2024.

This research was supervised by Ir. Mrs. Chairani Siregar, M.P. As chief supervisor and Mrs. Ir. Mindalisma, M.M. as a mentor member. This research aims to test the increase in soil C-Organic for the yield of Edamame Variety Soybeans through the application of golden Snail Liquid Organic Fertilizer and oil palm ash in Inceptisol soil. This research used a factorial randomized block design (RAK) with two treatment factors, namely golden Snail Liquid Organic Fertilizer and oil palm ash. The first factor is: golden Snail Liquid Organic Fertilizer consists of 4 levels, namely: K₀= control, K₁= 100 ml/polybag, K₂=200 ml/polybag, K₃= 300 ml/polybag. The second factor is: Palm oil ash consists of 4 levels, namely: A₀= control, A₁= 50 g/polybag, A₂= 100g/polybag, A₃= 150 g/polybag. The parameters observed were plant height, number of branches, stem diameter, number of root nodules, number of pods, pod weight, and organic C levels in the soil.

The results of the research showed that giving golden Snail Liquid Organic Fertilizer had a significant effect on plant height, number of branches, stem diameter, number of root nodules, number of pods, pod weight and c-organic content in the soil. The application of oil palm ash had a significant effect on plant height, number of branches, stem diameter, number of root nodules, number of pods, pod weight and c-organic content in the soil. The interaction between golden Snail Liquid Organic Fertilizer and oil palm ash had a significant effect on the number of root nodules, number of pods and pod weight.

Keywords: *Edamame Variety Soybean Plants, Golden Snail Liquid Organic Fertilizer, Oil palm ash, C-organic.*