

RINGKASAN

Penelitian ini akan dilaksanakan di lahan Percobaan Fakultas Pertanian Universitas Islam Sumatera Utara, Jln. Karya Wisata, Kecamatan Medan Johor, Kota Medan, Provinsi Sumatera Utara Ketinggian tempat ± 25 mdpl, dengan Topografi datar dengan jenis tanah ordo inceptisol. Penelitian ini dimulai pada Bulan Februari 2023 sampai dengan selesai.

Penelitian ini dibimbing oleh Ibu Ir. Chairani Siregar, M.P. sebagai ketua pembimbing dan Ibu Rahmi Dwi Handayani Rambe, S.P., M.P. selaku Anggota Komisi Pembimbing. Penelitian ini bertujuan untuk mengetahui pengaruh pemberian Pupuk Organik Cair limbah ikan terhadap pertumbuhan dan peningkatan produksi tanaman terung serta ketersediaan N total tanah, untuk mengetahui pengaruh pemberian pupuk kompos kandang sapi pada tanaman terung, untuk mengetahui interaksi pemberian urinkambing dalam pertumbuhan tanaman terung. Penelitian ini menggunakan Rancangan Acak Kelompok (RAK) Faktorial yang terdiri dari 2 faktor perlakuan yaitu : Faktor pertama pemberian Pupuk Organik Cair limbah ikan yang terdiri dari 4 taraf (P), yaitu : P₀ : kontrol (tanpa perlakuan Pupuk Organik Cair limbah ikan), P₁ : 100 ml/L/plot, P₂ : 200 ml/L/plot, P₃ : 300 ml/L/plot dan faktor kedua pemberian pupuk kandang kotoran sapi yang terdiri dari 3 taraf (K), yaitu : K₀ : Kontrol (tanpa perlakuan pupuk kandang kotoran sapi), K₁ : 5 ton/ ha (1,62kg/plot), K₂ : 10 ton/ ha (3,24 kg/plot). Parameter yang diamati adalah tinggi tanaman (cm), jumlah cabang (cabang), diameter batang (mm), jumlah buah per tanaman (sampel), jumlah buah per plot (buah), bobot buah per tanaman (gram), bobot buah per plot (gr) dan analisis % N total tanah.

Hasil penelitian menunjukkan bahwa pemberian POC limbah ikan berpengaruh nyata terhadap tinggi tanaman, jumlah cabang, diameter batang, jumlah buah pertanaman, bobot buah per tanaman dan per plot serta N total tanah. Secara umum perlakuan P₃ (300 ml/l/plot) memberikan hasil yang terbaik. Pemberian kompos kotoran sapi berpengaruh nyata terhadap tinggi tanaman, jumlah cabang, diameter batang, jumlah buah pertanaman, bobot buah per tanaman dan per plot serta N total tanah. Secara umum perlakuan K₂ (3.24 kg/plot) memberikan hasil yang terbaik. Interaksi antara pemberian POC limbah ikan dan kompos kotoran sapi berpengaruh nyata terhadap jumlah cabang, jumlah buah, bobot buah dan N total tanah. Bobot buah terbaik pada kombinasi perlakuan P₃K₂ (300 ml/L/plot POC + 3.24 kg pakan sapi/plot).

Kata Kunci : *Tanaman Terung, Pupuk Organik Cair Limbah Ikan dan Urin Kambing, Pupuk Kandang Sapi.*

SUMMARY

This research will be carried out in the experimental field of the Faculty of Agriculture, Islamic University of North Sumatra, Jln. Field Trip, Medan Johor District, Medan City, North Sumatra Province Altitude \pm 25 meters above sea level, with flat topography with soil types of the Inceptisol order. This research began in February 2023 until it was finished.

This research was supervised by Mrs. Ir. Chairani Siregar, M.P. as the head advisor and Mrs. Rahmi Dwi Handayani Rambe, S.P., M.P. as a member of the Advisory Commission. This study aims to determine the effect of applying fish waste liquid organic fertilizer on the growth and increase in eggplant production and the availability of n total soil, to determine the effect of applying cow manure compost to eggplant plants, to determine the interaction of giving goat urine on eggplant plant growth. This study used a factorial randomized block design (RBD) consisting of 2 treatment factors, namely: The first factor was the administration of fish waste liquid organic fertilizer consisting of 4 levels (P), namely: P0: control (without fish waste liquid organic fertilizer treatment), P1: 100 ml/L/plot, P2: 200 ml/L/plot, P3: 300 ml/L/plot and the second factor is the administration of cow dung manure which consists of 3 levels (K), namely: K0: Control (without cow dung manure treatment), K1 : 5 tons/ ha (1.62 kg/plot), K2 : 10 tons/ ha (3.24 kg/plot). Parameters observed were plant height (cm), number of branches (branches), stem diameter (mm), number of fruits per plant (sample), number of fruits per plot (fruit), fruit weight per plant (grams), fruit weight per plot (gr) and % N total soil analysis.

The results showed that the application of fish waste POC had a significant effect on plant height, number of branches, stem diameter, number of fruit planted, fruit weight per plant and per plot and N total soil. In general, the P₃ treatment (300 ml/L/plot) gave the best results. Application of cow manure compost significantly affected plant height, number of branches, stem diameter, number of fruit planted, fruit weight per plant and per plot and N total soil. In general, the K₂ treatment (3,24 kg/plot) gave the best results. The interaction between the provision of POC fish waste and cow manure compost significantly affected the number of branches, number of fruits, fruit weight and total N soil. The best fruit weight was in the P₃K₂ treatment combination (300 ml/L/plot POC + 3,24 kg cow manure/plot).

Keywords : *Eggplant Plants, Liquid Organic Fertilizer Fish Waste and Goat Urine, Cow Manure.*