

## RINGKASAN

Penelitian ini bertujuan untuk mengetahui pengaruh pemberian pupuk organik cair sayuran terhadap pertumbuhan dan produksi tanaman terung ungu (*S. melongena* L.). Untuk mengetahui pengaruh pemberian pupuk kandang kambing terhadap pertumbuhan dan produksi tanaman terung ungu (*S. melongena* L.). Untuk mengetahui interaksi pemberian pupuk organik cair sayuran dan pupuk kandang kambing terhadap pertumbuhan dan produksi tanaman terung ungu (*S. melongena* L.). Penelitian ini dibimbing oleh Bapak Dr. Ir. Rahmad Setia Budi, M.Sc. sebagai ketua pembimbing dan Bapak Dr. Ir. Muhammad Rizwan, M.P.selaku Anggota Komisi Pembimbing.

Penelitian dilaksanakan di lahan Percobaan Fakultas Pertanian Universitas Islam Sumatera Utara, Jln. Karya Wisata, Kecamatan Medan Johor, Kota Medan, Provinsi Sumatera Utara Ketinggian tempat  $\pm$  25 mdpl, dengan topografi datar dengan jenis tanah ordo Inceptisol. Penelitian ini telah dilaksanakan pada bulan Juni s/d Agustus 2024. Dengan menggunakan metode penelitian Rancangan Acak Kelompok (RAK) Faktorial yang terdiri dari 2 faktor perlakuan yaitu: Faktor pertama pemberian pupuk organik cair sayuran yang terdiri dari 4 taraf (P), yaitu: P<sub>0</sub> : Kontrol (Tanpa POC Sayuran); P<sub>1</sub> : POC Sayuran 40 mL/liter/Plot; P<sub>2</sub> : POC Sayuran 80 mL/ liter/Plot; P<sub>3</sub> : OC Sayuran 120 mL/liter/Plot. Faktor kedua pemberian pupuk kandang kambing yang terdiri dari 3 taraf (K), yaitu: K<sub>0</sub> : Kontrol (Tanpa pupuk kambing); K<sub>1</sub> : 5 ton/ha (720 g/plot); K<sub>2</sub> : 10 ton/ha (1.440 g/plot).

Hasil penelitian menunjukkan bahwa pemberian pupuk organik cair sayuran berpengaruh terhadap pertumbuhan tinggi tanaman, diameter batang, jumlah cabang dan jumlah buah per sampel, Tetapi tidak berpengaruh terhadap jumlah buah per plot, bobot per tanaman sampel dan bobot segar per plot. Perlakuan terbaik terdapat pada P<sub>3</sub> (POC sayuran 120 mL/liter/plot). Pupuk kandang kambing berpengaruh terhadap pertumbuhan tinggi tanaman, diameter batang, jumlah cabang, jumlah buah per sampel dan jumlah buah per plot. Tetapi tidak berpengaruh terhadap bobot per tanaman sampel dan bobot segar per plot. Perlakuan terbaik terdapat pada K<sub>2</sub> (pupuk kandang kambing 1.400 g/plot). Interaksi dari pupuk organik cair dengan pupuk kandan kambing berpengaruh terhadap tinggi tanaman dan diameter batang. Tetapi tidak berpengaruh terhadap jumlah cabang, jumlah buah per sampel, jumlah buah per plot, bobot per tanaman sampel dan bobot segar per plot. Interaksi terbaik terdapat pada P<sub>3</sub>K<sub>2</sub> (POC sayuran 120 mL/liter/plot dan pupuk kandang kambing 1.440 g/plot).

**Kata Kunci:** Pupuk Organik Cair Sayuran, Pupuk Kandang Kambing, Pertumbuhan, Produksi, Tanaman Terung Ungu

## SUMMARY

*This study aims to determine the effect of vegetable liquid organic fertilizer on the growth and production of eggplant plants (*S. melongena* L.). It also seeks to examine the effect of goat manure fertilizer on the growth and production of eggplant plants (*S. melongena* L.) and to analyze the interaction between vegetable liquid organic fertilizer and goat manure fertilizer on the growth and production of eggplant plants (*S. melongena* L.). This research is supervised by Dr. Ir. Rahmad Setia Budi, M.Sc., as the principal advisor, and Dr. Ir. Muhammad Rizwan, M.P., as a member of the advisory committee.*

*The research was conducted at the experimental field of the Faculty of Agriculture, Islamic University of North Sumatra, located on Jl. Karya Wisata, Medan Johor Subdistrict, Medan City, North Sumatra Province, at an altitude of approximately 25 meters above sea level, with flat topography and Inceptisol soil. The research was carried out from June to August 2024. A factorial randomized block design (RBD) was applied, consisting of two treatment factors: The first factor is the application of vegetable liquid organic fertilizer at four levels (P): P<sub>0</sub>: Control (No vegetable liquid organic fertilizer); P<sub>1</sub>: Vegetable liquid organic fertilizer 40 mL/liter/plot; P<sub>2</sub>: Vegetable liquid organic fertilizer 80 mL/liter/plot; P<sub>3</sub>: Vegetable liquid organic fertilizer 120 mL/liter/plot. The second factor is the application of goat manure fertilizer at three levels (K): K<sub>0</sub>: Control (No goat manure fertilizer); K<sub>1</sub>: 5 tons/ha (720 g/plot); K<sub>2</sub>: 10 tons/ha (1.440 g/plot).*

*The results of the study showed that the application of vegetable liquid organic fertilizer had an effect on plant height, stem diameter, number of branches, and number of fruits per sample, but did not affect the number of fruits per plot, weight per sample plant, and fresh weight per plot. The best treatment was found in P<sub>3</sub> (vegetable liquid organic fertilizer 120 mL/liter/plot). Goat manure fertilizer influenced plant height, stem diameter, number of branches, number of fruits per sample, and number of fruits per plot, but did not affect the weight per sample plant and fresh weight per plot. The best treatment was found in K<sub>2</sub> (goat manure fertilizer 1.440 g/plot). The interaction between vegetable liquid organic fertilizer and goat manure fertilizer affected plant height and stem diameter but did not influence the number of branches, number of fruits per sample, number of fruits per plot, weight per sample plant, and fresh weight per plot. The best interaction was found in P<sub>3</sub>K<sub>2</sub> (vegetable liquid organic fertilizer 120 mL/liter/plot and goat manure fertilizer 1.400 g/plot).*

**Keywords** : Vegetable Liquid Organic Fertilizer, Goat Manure Fertilizer, Growth, Production, Eggplant Plants.