

## RINGKASAN

Penelitian ini 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 dimulai pada Bulan februari 2023 sampai dengan April 2023.

Penelitian ini dibimbing oleh Ibu Rahmi Dwi Handayani Rambe SP,MP. sebagai ketua pembimbing dan Ibu Ir Chairani Siregar MP. selaku Anggota Komisi Pembimbing. Penelitian ini bertujuan Untuk mengetahui respon pemberian pupuk organik cair sayuran terhadap pertumbuhan dan peningkatan produksi tanaman terung ungu. Untuk mengetahui pengaruh pemberian pupuk kandang kotoran sapi terhadap pertumbuhan dan peningkatan produksi tanaman terung ungu. Untuk mengetahui interaksi pemberian pupuk organik cair sayuran dan pupuk kandang kotoran sapi terhadap pertumbuhan dan peningkatan produksi tanaman terung ungu. Penelitian ini menggunakan Rancangan Acak Kelompok (RAK) Faktorial yang terdiri dari 2 faktor perlakuan yaitu : pupuk organik cair sayuran dan pupuk kandang kotoran sapi. Faktor pertama pemberian pupuk organik cair sayuran yang terdiri dari 4 taraf, (P), yaitu :  $P_0$  = Kontrol,  $P_1$  = 40 ml/liter/plot,  $P_2$  = 80 ml/liter/plot,  $P_3$  = 120 ml/liter/plot. Faktor kedua pemberian pupuk kandang kotoran sapi yang terdiri dari 4 taraf, yaitu :  $K_0$  = Kontrol (tanpa perlakuan),  $K_1$  = 5 Ton/ ha (0,72 kg/plot) ml,  $K_2$  = 10 ton / ha (1.44 kg/plot). Parameter yang diamati adalah tinggi tanaman (cm), diameter batang, jumlah cabang (sampel), jumlah buah per sampel jumlah buah per plot, berat produksi tanaman per sampel, bobot segar tanaman per plot.

Hasil penelitian menunjukkan bahwa aplikasi pupuk organik cair (POC) sayuran Aplikasi POC sayuran berpengaruh signifikan terhadap tinggi tanaman, diameter batang, jumlah cabang, jumlah buah per tanaman, jumlah buah per plot, bobot buah per tanaman dan bobot buah per plot tanaman terung ungu. POC sayuran terbaik diperoleh dengan dosis 120 ml/L/plot ( $P_3$ ) Pemberian kotoran sapi berpengaruh signifikan terhadap tinggi tanaman, diameter batang, jumlah cabang, jumlah buah per tanaman, jumlah buah per plot, bobot buah per tanaman dan bobot buah per plot tanaman terung ungu. Aplikasi terbaik kotoran sapi diperoleh dengan dosis 1,44 kg/petak ( $K_2$ ) Interaksi POC sayuran dan kotoran sapi berpengaruh signifikan terhadap jumlah cabang, bobot buah per tanaman dan bobot buah per petak tanaman terung ungu. Aplikasi terbaik POC sayuran dan kotoran sapi (120 ml POC/L/plot + 1,44 .

**Kata Kunci :** Tanaman Terung Ungu, Pupuk Organi Cair Sayuran, Pupuk kandang kotoran sapi.

## SUMMARY

This research was carried out in the experimental land of the Faculty of Agriculture, Islamic University of North Sumatra, Jln. Karya Wisata, Medan Johor District, Medan City, North Sumatra Province The altitude of the place is  $\pm 25$  masl, with flat topography with soil types of the order inceptisol. This study starts from February 2023 to April 2023.

This research was supervised by Mrs. Rahmi Dwi Handayani Rambe SP, MP. as the chief supervisor and Mrs. Ir Chairani Siregar MP. as a Member of the Advisory Committee. This study aims to determine the response of vegetable liquid organic fertilizer to the growth and increase of purple eggplant plant production. To determine the effect of applying cow dung manure on the growth and increase of purple eggplant plant production. To determine the interaction of applying vegetable liquid organic fertilizer and cow dung manure on the growth and increase of purple eggplant plant production. This study used a Factorial Group Randomized Design (RAK) consisting of 2 treatment factors, namely: vegetable liquid organic fertilizer and cow dung manure. The first factor is the application of vegetable liquid organic fertilizer consisting of 4 levels, (P), namely:  $P_0 = \text{Control}$ ,  $P_1 = 40 \text{ ml / liter / plot}$ ,  $P_2 = 80 \text{ ml / liter / plot}$ ,  $P_3 = 120 \text{ ml / liter / plot}$ . The second factor is the application of cow dung manure consisting of 4 levels, namely:  $K_0 = \text{Control (without treatment)}$ ,  $K_1 = 5 \text{ tons / ha (0.72 kg / plot) ml}$ ,  $K_2 = 10 \text{ tons / ha (1.44 kg / plot)}$ . The parameters observed are plant height (cm), trunk diameter, number of branches (sample), number of fruits per sample number of fruits per plot, weight of crop production per sample, fresh weight of plants per plot.

The results showed that the application of liquid organic fertilizer (POC) vegetables Vegetable POC application had a significant effect on plant height, stem diameter, number of branches, number of fruits per plant, number of fruits per plot, fruit weight per plant and fruit weight per plot of purple eggplant plants. The best vegetable POC was obtained at a dose of 120 ml/L/plot ( $P_3$ ) Applying cow dung manure had a significant effect on plant height, stem diameter, number of branches, number of fruits per plant, number of fruits per plot, fruit weight per plant and fruit weight per plot of purple eggplant plants. The best application of cow dung manure was obtained at a dose of 1.44 kg / plot ( $K_2$ ) The interaction of vegetable POC and cow dung manure had a significant effect on the number of branches, fruit weight per plant and fruit weight per plot of purple eggplant plants. The best application of vegetable POC and cow dung (120 ml POC/L/plot + 1.44 kg cow dung fertilizer/plot).

**Keywords :** Purple Eggplant Plant, Vegetable Liquid Organi Fertilizer, Cow dung manure.